"Chinese Learning for Fundamental Structure, Western Learning for Practical Use?" The Development of Late Nineteenth Century Chinese Steam Navy Revisited

Shao, Junyu

Awarding institution:
King's College London

"CHINESE LEARNING FOR FUNDAMENTAL STRUCTURE, WESTERN LEARNING FOR PRACTICAL USE?"

The Development of Late Nineteenth Century Chinese Steam Navy Revisited

By
Junyu Shao

A THESIS
SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF WAR STUDIES
SCHOOL OF SOCIAL SCIENCE & PUBLIC POLICY
KING'S COLLEGE LONDON

LONDON, UNITED KINGDOM
AUGUST 2015

For my beloved motherland

Table of Contents

Conversion Tables

Currencies: 1 tael = £ 1/3 (6 shillings 8 pence)
(in 1894 the value of tael dropped to 3 shillings 2 pence)

Weights: 1 shi = 60.453 kilograms

Measures: 1 chi = 0.1 zhang = 14.1 inches

Major Chronological Periods

The Qing Dynasty (1644-1911): Daoguang 1821-1850
Xianfeng 1851-1861
Tongzhi 1862-1874
Guangxu 1875-1908
Xuantong 1908-1911

The Republic of China (1912-1949)

Note on Romanization of Chinese

This dissertation has used the Pinyin system throughout, except for a few spellings best known outside China in the Wade-Giles form, such as Sun Yat-sen (Sun Yixian in Pinyin).

Thesis Abstract

The defeats suffered by the Qing Empire in the two Opium Wars revealed to the Chinese how their traditional armed forces were incapable of defending the country against Western aggressors. In the second half of the nineteenth century, a group of Chinese elites advocated that China needed to strengthen herself by pursuing a degree of military modernisation which, in effect, meant Westernisation. Under the banner of '*Chinese learning for fundamental structure, Western learning for practical use*', a substantial Western-style steam navy was established and was considered one of the most powerful in East Asia. Yet despite this huge effort, this force invariably failed to fulfil its task of safeguarding the empire.

The central argument of this dissertation is that the failure of the Chinese steam navy was inevitable, primarily because of the Qing Empire's 'fundamental structure' being incompatible with the requirements of a modern steam navy. China in the second half of the nineteenth century was characterised by autocratic Manchu rule, decentralisation of provincial authorities, self-sufficient agrarian economy, and a social elite consisting of Confucian scholars. This research analyses in detail how such a 'fundamental structure' affected the development of the Chinese naval power in the facets of the statesmen behind the navy, the naval officer corps, the building and acquisition of ships and the way in which the naval power was used. On this basis, the dissertation draw the conclusion that a 'fundamental structure' such as that of the Qing Empire was not conducive to producing a powerful navy, and that the defeat of that navy was inevitable and not accidental.

This research examines the development of the Chinese steam navy against the history of the nation during the late nineteenth century, and employs existing literature on seapower for analytical guidance. The main body of the dissertation is based on published and unpublished primary sources.

Chapter One

Introduction

1.1 The Research Question and its Significance

In the aftermath of the two the Opium Wars, some Qing Dynasty Chinese elites realised that challenges from the outside world were no longer avoidable, and the Qing Empire (AD 1644-1911) must change if it was to survive from foreign aggressions. In 1861, the Qing Empire embarked on a campaign known today as the Self-Strengthening Movement. Under the two banners of the movement: '*learn barbarians' superior techniques with which to repel the barbarians*'[1] and '*Chinese learning for fundamental structure, Western learning for practical use*'[2] these elites embarked on adopting Western weapons to safeguard the Empire. As a key feature of the Self-Strengthening Movement, a Western-style steam navy (in fact four mutually independent navies) was established and given the task of warding off foreign seaborne aggressors. In the eyes of many Chinese and foreign observers it was a naval force of remarkable strength. In its heyday, the Chinese steam navy boasted sixty-five large warships and forty-five torpedo boats, and held the eighth place in the world in terms of its strength.[3] To the

[1] '师夷长技以制夷'. Barbarians: the traditional Chinese worldview developed its particular image of the
[2] '中学为体，西学为用'. There is no clearly stated definition of *Western learning*. *Western learning* included a wide range of knowledge imported from the West. The term was coined as opposed to China's traditional scholarship – the *Chinese learning*. *Western learning* in a narrow sense denotes modern science and technology, and *Western learning* in a broad sense includes the political, economic, ideological aspects of Western thinking.
[3] Immanuel Hsü, *The Rise of Modern China*, Third Edition, (Oxford: Oxford University Press, 1983), p. 340. Also see Benjamin A. Elman, 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895'. *Modern Asian Studies,* Vol. 38, No. 2 (2004), pp. 318-319.

disappointment of the Self-Strengtheners, the Chinese steam navy failed to fulfil its duty. It suffered catastrophic defeats in its two major tests: the 1884-1885 Sino-French War and the 1894-1895 First Sino-Japanese War.[4] These two maritime defeats, the latter in particular, sounded the death knell for the Self-Strengthening Movement. The Qing Empire fell into an irreversible decline after the First Sino-Japanese War, and eventually collapsed and was overthrown by the Republican Revolution of 1911.

The Self-Strengthening Movement is worth studying not merely because its failure exacerbated China's security situation and contributed to a particularly chaotic era of modern Chinese history known as the 'century of humiliation'; no less significantly, many legacies of the Self-Strengthening period are still with us today. One particular legacy that demands a re-examination of this period of history is the different understanding of the word *seapower* in Chinese and English languages. In the Oxford English Dictionary, the word *seapower* is defined as: (1) '*a nation or state having international power or influence on sea*'; and (2) '*the strength and efficiency of a nation (or nations generally) for maritime warfare*'.[5] In the Chinese language, seapower as a word was introduced in the aftermath of the naval debacles of 1894-95 combining the characters *hai and quan.* Literally, *hai* means *maritime* or *sea*, and *quan* refers to, amongst other things, either power/strength, or legal rights, or advantageous position. The combined word *hai-quan*, therefore connotes, simultaneously, 'strength at sea', 'legal rights at sea' and 'advantageous position at sea'.

The traumatic outcomes of the Sino-French War and the First Sino-Japanese War became intertwined with the Chinese interpretation of *hai-quan*. Its definition came to represent the three elements that the Qing China had lost in the wars against the French and the Japanese – its strength at sea, its legal rights and its advantageous position at sea. Since the key reason for these losses was perceived as owning to the weakness of the navy, the Chinese word *hai-quan* began to associate itself exclusively with naval power, and not the holistic notion defined by the English word *seapower* i.e. '*a nation or state having international*

[4] Before the First Sino-Japanese War, most Westerners thought China had the advantage. See Kwang-Ching Liu and Richard J. Smith, 'The Military Challenge: The North-west and the Coast' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), pp. 268-269.

[5] Oxford English Dictionary online version.

power or influence on sea' and '*the strength and efficiency of a nation (or nations generally) for maritime warfare*'.

By defining the word *hai-quan* purely on the strength element of *seapower*, in other words the strength of the navy, China became overly concerned with the consequences of possessing naval strength (that is, an advantageous position at sea, which others might contest) or losing it (thus losing one's legal rights at sea). Therefore the Chinese neglected the full meaning of the English word *seapower* and all the elements concerning the type of governance and national organisation required for strength at sea.

This partial interpretation of *seapower* had far-reaching consequences. Many later generations of Chinese statesmen, military thinkers and academics continued to show the inclination to understand seapower in the light of 'strength at sea', and to justify the 'advantageous position at sea' to protect China's 'legal rights at sea' from imperialism (which was later rephrased into hegemonism). In the first major inspection of the newly established People's Liberation Army Navy in 1953, Mao Zedong set the tone for the service when he said: '*in order to resist invasions of imperialism, we must build a powerful navy*.'[6] Adm. Liu Huaqing of the navy further elaborated that world's navies are of two types: those that serve the ambitious purpose of contesting the status of hegemony, and those that aim at safeguarding national independence, territorial integrity and sovereignty. He categorised the People's Liberation Army Navy into the latter and defined it as '*a defensive force to protect national maritime defence security, to safeguard maritime rights, and to secure the nation against seaborne imperialism and hegemonic aggression*.' [7] Such views echoed the Self-Straighteners of the late 19th century to a considerable degree in the sense that the Chinese navy was conceptualised as a 'Great Wall at Sea' to ward off foreign invasions.

This view is prevalent in today's Chinese academia. Maj. Gen. Zhang Shiping of the Academy of Military Science argued that seapower to China meant the

---

[6] 'Central Leadership and Navy Building', News of the Communist Party of China, *People's Daily Online*, accessed 1st August 2015, http://dangshi.people.com.cn/GB/151935/151937/151943/index.html.

[7] Huaqing Liu, '海军的地位与作用问题 Haijun de Diwei yu Zuoyong Wenti [The Role and Strategic Significance of the Navy]' in Huaqing Liu. *刘华清军事文选 Liu Huaqing Junshi Wenxuan [Selected Military Works of Liu Huaqing]*, Vol. 1. (Beijing: PLA Press, 2008), p. 304.

naval capabilities to safeguard the administrative control in the contiguous zone and the exclusive economic zone, as well as the naval capabilities to counter armed foreign attack, deliberate invasion and occupation, and breach of international and Chinese domestic law.[8] Maj. Gen. Jin Yinan of the National Defence University, echoed Zhang by arguing that China's seapower should be interpreted against 'sea rights' (*sic*.) in the Chinese context.[9] The views of these military scholars are supported by a number of civilian academics. For example, Zhang Wenmu argues that the military strength at sea *per se* is neutral, and it is legitimate when the strength is employed to safeguard a nation's 'legal rights at sea', and it is hegemonic and thus illegitimate when the naval strength is wielded in order to manipulate or exert control over other nations.[10] Professor Liu Zhongmin and Cao Wenzhen both supported this view and called for a stronger naval power for this purpose.[11]

It can be distilled from this brief review that the discussion of seapower in present-day China is rooted in the traumatic naval defeats of the late 19th century. The logic of this kind of thinking runs as follows: since the suffering of the Chinese nation in the 'century of humiliation' was caused by inadequate naval power, China today needs a strong navy to prevent similar tragedies from occurring again. Therefore, many Chinese statesmen, military thinkers and academics have been calling for a stronger navy with better ships, better armaments, more professionally trained men, an efficient command mechanism and greater governmental support. However, in doing so, they neglect a vital historical question: why did the Qing Empire fail to attain a sufficient degree of naval power? This question is too important to be left unanswered.

Perplexingly, however, the Self-Strengtheners of the Qing Dynasty China did actively seek a strong navy. A glance at the historical archives of the

---

[8] Shiping Zhang, *中国海权 Zhongguo Haiquan [China's Sea Power]*. (Beijing: People's Daily Press, 2009), pp. 211-213.

[9] Yinan Jin, '钓鱼岛争端唤醒中华民族海权意识 Diaoyuao Zhengduan Huanxing Zhonghua Minzu Haiquan Yishi [The Diaoyu Islands Dispute Awakens Chinese Nation's Consciousness of Sea Power]', *China National Radio Website*, last modified November 14, 2013, http://mil.cnr.cn/mjzl/jynzl/zjgd/201311/t20131114_514134765.html.

[10] Wenmu Zhang, *论中国海权 Lun Zhongguo Haiquan [On China's Sea Power]*, (Beijing: Ocean Press, 2009), pp. 1-8.

[11] Zhongmin Liu, '海权问题与中美关系论述 Haiquan Wenti Yu Zhongmei Guanxi Lunshu [Sea Power and the Debate on Sino-US Relations]', *Northeast Asia Forum*, No. 5. (Sep-Oct., 2006), pp. 69-75. Wenzhen Cao, '美国的海洋霸权战略与中国的对策 Meiguo de Haiyang Baiquan yu Zhongguo de Duice [American Maritime Hegemony and China's Countermeasures]'. *Strategy and Management*, No. 5. (Sep-Oct., 2011), pp. 69-82.

Self-Strengthening period shows that the Chinese elites' will to have powerful warships, capable men and effective commanding system was not lacking. In which case this begs the question: what went wrong with the Qing Empire's naval development? Many have claimed that corrupt government officials and the incompetence of naval commanders were the main causes of the defeats of the Chinese navy.[12] This thesis disputes this argument. Admittedly, problems such as corruption and incompetence did exist and did have deleterious effects on the strength of the navy. But these problems were certainly not unique to China; moreover, some historians greatly exaggerate the seriousness of these problems because of a lack of better and deeper explanations.[13]

In contrast, this dissertation argues that the fundamental cause of the weakness of the Chinese steam navy in the 19th century lies with the institutions of the Qing Empire. In other words, the causes of the failure lay deep in the institutions of the Qing Empire rather than on the mere corruption or incompetence of a few officials and officers. As the Oxford English Dictionary suggests, seapower is expressed outwardly in naval strength; and foundationally, it tends to align closely with a particular type of nation. This notion suggests that we should depart from the superficial calculations of warships' performance and its immediate contributors as well as the over-simplifying opinion that sees naval power as an outgrowth of the national wealth. Instead, it should be realised that powerful navies are more likely to stem from a particular type of nation or national organisation – in other words, seapowers. Put simply, 19th century China was utterly different from those nations commonly recognised as seapowers such as Athens, Venice, Holland and Britain. From this observation arises the core hypothesis of this thesis: specifically, that the requirements of a Western-style steam navy was incompatible with the Qing Dynasty's state institutions. That deep incompatibility between a steam navy and the state that

---

12 Among those who hold this view are Maj. Gen. Jin Yinan, Maj. Gen. Xiao Yusheng, Maj. Gen. Luo Yuan, etc. See Yazhou Liu et al. eds., *甲午殇思 Jiawu Shangsi [Grief Thoughts on the First Sino-Japanese War]*, (Beijing: Shanghai Far East Publishers, 2014).

13 For example, in an article challenging the traditional claim of the weakness of the Chinese Western-style army in the First Sino-Japanese War, Allen Fung demonstrated that the Chinese Western-style army, which was also a fruit of the Self-Strengthening Movement, were in fact well-equipped during the early stage of the war with Japan and that the Chinese field commanders were not as incompetent as many claimed. Allen Fung, 'Testing the Self-Strengthening: The Chinese Army in the Sino-Japanese War of 1894-1895', *Modern Asian Studies*, Vol. 30, No. 4, Special Issue: War in Modern China (Oct., 1996), pp. 1007-1031.

was meant to support it was the fundamental cause of the failure of the Qing Empire's steam navy.

1.2 Literature Review

The current literature does not offer a satisfactory answer to the core question of this research. In English, John L. Rawlinson's *China's Struggle for Naval Development: 1839 – 1895* is the primary monograph dealing with the topic of the Qing Empire's steam navy.[14] Different from other historians who either limited themselves to narrating what had happened, or pointing an accusing finger at superficial 'symptoms' of the problems of the navy such as insufficient firepower or lack of training to explain its defeats, Rawlinson's work attempts to penetrate to a deeper level of analysis. He argued that a *contradiction* between modernisation and Confucianism was the fundamental cause of the defeats of the Chinese steam navy.

While this argument sounds compelling, Rawlinson failed to provide an in-depth explanation of what he identified as the *contradiction* between the navy and the Confucian tradition. His critic J. Wang pointed out that *China's Struggle for Naval Development* was more of a narrative than an analysis: the lion's share of the book is devoted to the organisation of the Fuzhou Navy Yard and the conduct of the Sino-French War and the First Sino-Japanese War, whereas many more profound topics such as the Chinese Board of Admiralty, financing and training received insufficient attention. In a similar way, David Fong and Jack Gerson also criticised Rawlinson work: they argue that '*… the struggle for naval development is often lost sight of because so much of his attention is given to the details of administrative and technological configurations of the major Foochow, Kiangnan and Tientsin complexes and the "battles" of Sino-French and Sino-Japanese Wars.*'[15]

Ultimately, Rawlinson's argument is more intriguing than enlightening. He

[14] John L. Rawlinson, *China's Struggle for Naval Development: 1839-1895*, (Cambridge, MA: Harvard University Press, I967).
[15] David Fong and Jack Gerson, Review of *China's Struggle for Naval Development: 1839-1895*. By John L. Rawlinson. *The Journal of Asian Studies*. Vol. 27, No. 1. (Nov., 1967), p. 139.

only offers broad brush stroke and even simplistic judgements, which leave the misleading impression that 'Confucianism should take the blame for the Qing Empire 's naval defeat' and 'if China had discarded the whole package of its traditional institutions and adopted a Western system, then the defeat could have been avoided'. In other worlds, Confucianism according to Rawlinson is at once an all-pervasive yet, in his analysis anyway, difficult to pinpoint cause of the naval failure. Rawlinson's argument about the tension between Confucianism and modern navy is an excellent starting point for further research, including the research in this thesis, but his book is in no way definitive.

Richard Wright's work *the Chinese Steam Navy: 1862-1945* is also an outstanding book that covered the Self-Strengthening period.[16] In the book he not only outlined the evolution of the Chinese steam navy, but also provided large amount of photographs and detailed technical information of the important foreign and home-built warships of that navy. These materials were not available in Rawlinson's work. Wright's work helped to bridge the gap between the Chinese steam navy and that of the rest of the world, and contextualised the Chinese efforts of building a steam navy into the bigger picture of global naval development in the modern era. Nonetheless, Wright's book focuses more on the ships and the sea battles than with the navy as a whole. Wright's critic M.R. Peattie pointed out that the historical understanding displayed in *the Chinese Steam Navy: 1862-1945* was weak.[17] In spite of the rich information about ships, Wright remained – probably due to the lack of access to Chinese materials – an outside observer not being able to form deeper historical insights. Therefore, although Wright's work remained as one of the few books in English literature about the late 19th century Chinese steam navy, it plays only a complementary role to Rawlinson's book when it comes to the understanding of the navy's defeats.

In Chinese literature, the number of studies concerning late 19th century Chinese steam navy is richer than those in the English language. Primary works in this field include: Jiang Ming's *Longqi Piaoyang de Jiandui* (*Dragon Flags over*

16 Richard N. J. Wright, *The Chinese Steam Navy, 1862-1945*. (London: Chatham, 2000).
17 Mark R. Peattie, Review of *The Chinese Steam Navy, 1862 – 1945*. By Richard N. J. Wright. *War in History*. Vol. 10, No. 1. (Jan., 2003), p. 117.

the Navy: The Rise and Fall of the Sea Fleet in Modern China '龙旗飘扬的舰队'), Wang Jiajian's *Li Hongzhang yu Beiyang Haijun* (*Li Hongzhang and the Beiyang Fleet: The Failure and the Lessons of Naval Construction in Late Imperial China* '李鸿章与北洋海军'), and Qi Qizhang's *Wanqing Haijun Xingshuai Shi* (*The Rise and Fall of the Navy of the Late Qing Dynasty* '晚清海军兴衰史').[18] Jiang's book divided the naval development of the Qing Empire from 1861 to 1911 into four periods and organised the materials in a chronological order. Most of the attention is given to the building of the navy within the four respective periods and the maritime wars that marked the turning from one period to another. Wang's work focuses on the Beiyang Fleet – the elite fleet of the navy and the role that Li Hongzhang played in its development. Differing from Jiang, Wang organised his book thematically. The narrative of his book covers a number of key aspects of the Chinese steam navy in the late 19th century, such as the background surrounding its founding, its personnel, training and equipment. It also covers the naval bases, fortifications, funding as well as other peacetime activities. As to Qi's book, the first half of it focuses on the early stage of the Qing Empire's naval endeavours and examines a variety of issues ranging from the Opium Wars to the development of the Chinese Steam Navy. The second half of the book turns to focus on the two major maritime wars the navy participated in the last two decades of the 19th century.

In spite of their varied approach in their book structures, a closer examination shows that they are not significantly different from each other. Firstly, all three books are based on virtually the same collection of primary and secondary historiographical sources. While helpful in broadening views of the navy, they did not offer a deeper understanding of it. Secondly, the books all focus on telling what happened, but shed little light on why things happened the way they did. They lack critical analyses of the key issues and causes in a systematic and explicit way. This narrative approach is, to an extent, confusing

[18] Ming Jiang, *龙旗飘扬的航队-中国近代海军兴衰史 Longqi Piaoyang dejiandui: Zhongguojindai Haijun Xingshuaishi [Dragon Flags over the Navy: The Rise and Fall of the Sea Fleet in Modern China],* (Beijing: Sanlian Shudian, 2002). Jiajian Wang, *李鸿章与北洋舰队:近代中国创建海军的失败与教训 Li Hongzhang yu Beiyang jiandui: jindai Zhongguo Chuangjian Haijun de Shibai yu jiaoxun (Jiaoding Ban) [Li Hongzhang and the Beiyang Fleet: The Failure and the Lessons of Naval Construction in Late Imperial China]*, Revised Edition, (Beijing: Sanlian Shudian, 2008). Qizhang Qi, *晚清海军兴衰史 Wanqing Haijun Xingshuaishi [The Rise and Fall of the Navy of the Late Qing Dynasty]*, (Beijing: People's Press, 1998).

because it tends to make the defeat of the Chinese steam navy appear to have been caused by a series of accidents rather than through institutional deficiencies.

1.3 Research Outline

The core hypothesis of this dissertation is that it is the incompatibility between the Qing Dynasty China's state institutions and the requirements of a Western-style steam navy that was the fundamental cause of the inadequacy of the Chinese steam navy. Why is the compatibility important? Samuel Huntington pointed out that the military of any society are shaped by two forces: a functional imperative stemming from the threats to the society's security and a societal imperative arising from the social forces, ideologies, and the institutions dominant within the society. A military that reflects only social values may be incapable of effectively performing its function. On the other hand, military institutions purely shaped by functional imperatives may be impossible to contain within society. The degree to which they conflict depends upon the intensity of the security needs and the nature and strength of the value pattern of the society.[19] Jiang Baili, a Chinese military thinker of the Republican era, anticipated Huntington by arguing that the conformity between a nation's 'living conditions' and 'fighting conditions' makes a nation militarily powerful and conversely the discord between these two conditions renders a nation militarily weak.[20]

If we examine the two slogans of the Self-Strengthening Movement '*Chinese learning for fundamental structure, Western learning for practical use*' and '*learn the barbarians' superior techniques with which to repel the barbarians*' through the lens of Huntington and Jiang, we can conclude the following two points: the first point is that the adoption of 'Western learning', or 'barbarians' superior techniques' i.e. a steam navy was driven by a functional imperative – the need to

[19] Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations*, (Cambridge MA: Belknap Press of Harvard University Press, 1957), p.2.
[20] Baili Jiang, *国防论 Guofang Lun [On National Defence],* (Hong Kong: Open Page Publishing Co., 2013), p.3.

tackle the newly appeared maritime threats. Second, the Self-Strengthening Movement did not intend to change the 'fundamental structure' of the Qing Empire. In other words, the Self-Strengtheners wanted to force a marriage between the traditional Chinese system and a Western-style steam navy. Therefore, the extent to which the Chinese 'fundamental structure' was compatible with the requirements of the steam navy would determine the success or failure of the latter.

***

At this point, a deeper reflection on the concept of seapower is needed. Yet it was not an easy task even for Alfred T. Mahan, who popularised the word 'seapower', but who did not define it explicitly. This research will certainly not try to formulate a definition of seapower, but the dual nature of seapower needs to be underscored in the light of Huntington's and Jiang's theory: seapower is simultaneously a *quantitative* concept (having a navy) and a *qualitative* concept (being a maritime nation); and if a country *is* a seapower, it tends to *have* more seapower – a stronger navy – than those that *are not* maritime nations.

Outwardly, seapower is a quantitative concept, which means virtually all countries *have* a degree of seapower. Geoffrey Till pointed out that '*seapower is a relative concept, something that some country have more than others. The real issue is the matter of degree. Nearly all countries have a degree of seapower.*'[21] Seapower in a quantitative sense is mainly expressed in, especially in the late 19th century and prior, naval power. Naval power usually embodied in the amount of naval assets that a nation have, such as the number of warships and their amour, firepower, speed, and the competence of its commanders and crews.

At the same time, seapower is a qualitative concept, which means some countries *are* seapowers whilst others are less so. Richard Harding pointed out that '*seapower lay not just in the navy or battlefleet, but in the effective integration of her administration, political system, army, colonies, and maritime economy*

[21] Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*. Second Edition, (London: Routledge, 2009), p. 22.

towards the ends of the state.'[22] Seapower in a qualitative sense means a particular way of organizing national life. A glance at the nations and states that had been broadly acknowledged to be seapowers throughout history, such as Athens, Venice, Holland and Britain, reveals that they have many key features of their national lives in common: all are littoral states, all had seaborne trade as the pillar of its economy and all are, albeit to a varied extent, democracies. It is obvious that these features do not come as a natural consequence of the development of feudal-agrarian society like the imperial China. In other words, *being* a seapower is not a higher stage of feudal-agrarian society; rather, it is more of a choice and a particular pattern of national life, which includes a package of political, economic and ideological settings.

Moreover, nations that *are* seapowers (maritime nations) tend to *have* more seapower (stronger navies). In reviewing the emergence of the British Royal Navy as the world's most powerful navy, Harding concluded that the rise of that navy was enabled by the adjustment of a series of political, economic, social and technological elements of the society:

> '[the process through which the British Royal Navy achieved global dominance] *was the result of making short- and long-term adjustments to meet the changing requirements of social expectations, the economy, the objective of the state, competition from enemies, its own social and organisational systems and technology. The navy has been of crucial importance to the political, cultural and economic evolution to Britain. Britons' perceptions of themselves have been shaped to a marked degree by an understanding of their geographical position and the role of the sea in the development of the islands.*'[23]

In other words, the rise of the British Royal Navy is, to a marked extent, the consequence of the nation's becoming a seapower.

Here a brief sketch of what makes a country a seapower is needed. In his seminal book *the Influence of Seapower upon History 1660-1783*, Mahan

[22] Richard Harding, *Seapower and Naval Warfare, 1650-1830*, (London: UCL Press, 1999), p. 286.
[23] Richard Harding, *The Evolution of the Sailing Navy, 1509-1815*. First American Edition, (New York: St. Martin's Press, 1995), p. 142.

identified six factors as determinants of whether or not a nation is eligible for the title of a seapower.[24] They are: (1) geographical position, (2) physical conformation, (3) extent of territory, (4) number of population, (5) national character and (6) character and policy of governments.[25] In summarizing Mahan's six points, Paul Kennedy pointed out that the first three elements are essentially geographical, which include: a favourable geographical position that enabled the nation to concentrate upon the growth of seapower; and a well situated position that provided the nation with an easy access to oceanic waterways, good harbours as well as a seaboard which was not too difficult to defend and was not divided; and a sparse soil and climate that often served as an inducement to overseas endeavour. Mahan's three latter points, according to Paul Kennedy, are also interconnected: the number of population that 'following the sea' both in terms of those engaged in maritime commerce and those readily available to the navy; the nation's inclination to exploit the fruits which the sea offers (e.g. seaborne commerce and overseas interests) and readiness to make a sufficient standing investment in maritime strength to protect its interests upon and across the sea; and the government's capability in fostering the nation's naval and commercial potential in time of peace, and skilfulness in the exploitation of seapower in times of war.[26]

A preferable approach of pursuing naval strength is to become a maritime nation by realigning the nation's political, economic and ideological settings with the abovementioned requirements. However, there are some countries that cannot or/and do not want to pursue naval strength by becoming a maritime nation. The incompatibility between their pattern of national life and the requirements of navy will have adverse impacts on the results of nation's achievement in the pursuit of a strong navy. G. Till pointed out:

---

[24] It should be pointed out that (a) Mahan's six points are not universally accepted, some naval thinkers formulated their own version of determinants of seapower; (b) the significance of the points changes over time. Examples of critiques of Mahan's points are seen in, amongst others, Eric Grove, *The Future of Sea Power*, (Annapolis: Naval Institute Press, 1990), pp. 221-232, Paul Kennedy, *The Rise And Fall of British Naval Mastery*, (London and Basingstoke: The Macmillan Press, 1983), pp. 348-349, and Till, *Seapower,* pp.83-113. But few of Mahan critics deny that being a seapower means accepting a particular set of political, economic and cultural arrangement, and the critiques rarely tried to subvert Mahan's points altogether.

[25] Alfred Mahan, *The Influence of Sea Power Upon History: 1660–1783*, (New York: Dover Publication, Inc., 1989), pp. 29-69.

[26] Kennedy, *The Rise And Fall of British Naval Mastery*, pp. 5-6.

'Historians have drawn clear distinctions between organic seapower which develops naturally (Britain, the Netherlands) from the artificial variety that is the product of governmental fiat (the Russian Navy of Peter the Great). The latter is often said to be shallow-rooted and unlikely to last; the former is seen as preferable. Even so, most seem to think that governments can, and indeed should want to, develop their seapower and so need to work out a strategy for doing so… This may not be easy, since the significance of these constituents [of seapower] *may depend very much on a strategic context over which national governments have little control…'*[27]

***

In the light of the above discussions, the following passages will take a closer look at the approach through which the Self-Strengthening Movement pursued the Western-style steam navy. Many previous researches isolated the development of the Chinese steam navy from the Self-Strengthening Movement, as if they were two mutually independent topics, which was certainly not the case. The Chinese steam navy was shaped by the political, economic and ideological forces of the late 19th century China. This research will contextualise the development of the Chinese steam navy into the background of the Self-Strengthening Movement and try to understand the former's defeat against the latter.

What was the purpose of the Self-Strengthening Movement? A glance at its first slogan '*learn barbarians' superior techniques with which to repel the barbarians*' reveals the answer: the ultimate purpose of China's adoption of Western weapons was to resist foreign invasions and to prevent the tragedies such as the Opium Wars from occurring again. Those wars showed the Chinese that the Westerners' weaponry – warships in particular – were far more powerful and effective than their Chinese equivalents. In order to make up for the weaknesses in military capability and to better safeguard China's sovereignty, the weapons of the Western 'barbarians' had to be adopted. In other words, the

[27] Till, *Seapower*, p. 83.

Qing Empire's building of a Western-style steam navy was motivated by, in Huntington's words, a 'functional imperative'.

Another question follows: at what level was the Westernisation was carried out? A glance at the second slogan of the Self-Strengthening Movement '*Chinese learning for fundamental structure, Western learning for practical use*' reveals the answer: the Westernisation was limited to a military (practical) level, while traditional Chinese institutions remained unchanged throughout the Self-Strengthen Movement. In fact, the exact motivation of China's adoption of Western weapons was to *defend* the old institutions. Immanuel C.Y. Hsü pointed out that the advocates of the Self-Strengthening Movement promoted modern projects primarily to enable the Qing Empire to resist foreign aggression: '*they never dreamed of remaking China into a modern state. In fact, they strove to strengthen the existing order rather than to replace it. They had absolutely no conception of economic development, industrial revolution and modern transformation. Consequently their endeavours resulted in no more than a handful of isolated modern enclaves scattered over an otherwise traditional country, in which the old institutions remained dominant.*' [28] In short, the 'societal imperative', to employ Huntington's words, remained unchanged throughout the Self-Strengthening Movement.

Historians generally agree that the history of the Self-Strengthening Movement can be divided into three periods.[29] In the first, from 1866 to the early 1870s, China embarked on the pursuit of Western firearms, machines and scientific knowledge, a number of industrial plants devoted to shipbuilding, production of ammunitions and equipment such as the Fuzhou Shipyard, the Jiangnan Arsenal and the Tianjin Arsenal were established. During the second period, from the early 1870s to 1885, tensions between China and foreign countries such as Japan's 1874 Invasion of Taiwan, the Margary Affair, and the Sino-French War exerted further pressure on the Qing Empire to build a stronger navy. This

[28] Hsü, *The Rise of Modern China*, p. 288.

[29] See Albert Feuerwerker, *China's Early Industrialization: Sheng Hsuan-huai (1844-1916) and Mandarin Enterprise*, (Cambridge, MA: Harvard University Press, 1958), p.9. Xulu Chen, *近代中国社会的新陈代谢 Jindai Zhongguo Shehui de xinchendaixie [Metabolism in Modern Chinese Society]*, (Shanghai: Shanghai People's Press, 1992), pp. 109-115. Yi Dai, '洋务历史试论 Yangwu Lishi Shilun [A Tentative Essay on the Foreign Affairs Movement]' in *洋务运动史论文选 Yangwu Yundong Shi Lunwen Xuan [Selected Papers on the History of the Foreign Affairs Movement]*. Fangji Ruan et al. eds., (Beijing: People's Press, 1985), pp. 1-10. Hsü, *The Rise of Modern China*, p. 282.

period saw substantial increases in Chinese naval power. Modern defence cost far more than traditional defence, a degree of modern industries such as mining, metallurgy and transportation were established to support the military endeavours. In the last stage lasting from the end of the Sino-French War in 1884-85 to the end of the First Sino-Japanese War in 1894-95, the emphasis on military and naval build-up continued. This period witnessed the organisation of the Chinese Board of Admiralty – the *Haijun Yamen* and the formal establishment of the Beiyang Fleet. Mercantile enterprises were established in the hope that they could facilitate the military modernisation by providing it with funds; however the officials welcomed private capital but resented private control. The development of Chinese business sector was hindered by the bureaucracy and remained very weak.

It can be concluded from this brief review that the Self-Strengthening efforts focused on military modernisation/Westernisation, but little effort was made to change traditional Chinese institutions. Hsü pointed out: '*the scope of activity* [of the Self-Strengthening Movement] *was limited to firearms, ships, and machines, etc. No attempts were made to assimilate Western institutions, philosophy, arts and culture. The Self-Strengthening Movement barely scratched the surface of modernisation, without achieving a breakthrough in industrialisation.*'[30] Indeed, the movement was in fact activities of modernisation/Westernisation carried out only at a military level rather than through a sweeping reform of the state.

The word 'Self-Strengthening Movement' is commonly employed in English literature to refer to that movement. But in the late 19th century when the movement was active, it was more commonly known inside China as *yang wu* (洋务), which literally means 'Western affairs' or 'foreign matters'. Yen-ping Hao and Erh-min Wang pointed out that the movement was China's response to the crisis in relations with the outside world, and in its narrow sense the term 'Western affairs' means the adoption of Western technological knowledge.[31] The

[30] Hsü, *The Rise of Modern China*, p. 287.

[31] Yen-ping Hao and Erh-min Wan, 'Changing Chinese Views of Western Relations, 1840-95' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 167. In a broad sense, the *yang wu* also included, according to Ting-yee Kuo and Kwang-Ching Liu, the handling of diplomacy, foreign trade revenues and all matters concerning traders and missionaries, as well as the management of new programmes in which things Western were involved, such as language schools, army training, arsenals, shipyards, mines, merchant steamships and the navy. Ting-yee Kuo and Kwang-Ching Liu, 'Self-Strengthening: The Pursuit of

Chinese naming of the movement – *yang wu* revealed that the Westernisation was largely regarded as a means to tackle foreign threats, rather than as a reform that could transform the nation. Ultimately, as we shall see in this thesis, the steam navy remained largely quarantined from Chinese society.

The Self-Strengthening Movement, therefore, was a movement that tried to achieve modernisation/Westernisation at a military level to safeguard the traditional Chinese institutions. What was this 'China' that the movement was supposed to defend? It would be misleading if the notion of 'China' were to be interpreted from today's perspective. Today's understanding of 'China' is in agreement with the Western sense, which considers China as a sovereign state like any other state in the world in line with the Westphalian model of international relations. However, it should be pointed out that the concept of sovereignty and nation-state was not introduced to China until as late as the turn of the 20th century.[32] During the Self-Strengthening period, the notion of China was subjected to a different interpretation, namely the Sino-centric system, in which China saw international relations as '*both hierarchical and centripetal with China and its emperor located at a centre that the constituents units of various kinds and sizes encircled in increasingly distant orbit*'.[33] One aspect of this system needs to be stressed here: the Chinese system featured a very weak sense of nationalism and territoriality. Instead, the 'China' that the movement was trying to defend was the traditional Chinese pattern of national life.[34]

In other words, what the Self-Strengthening Movement was trying to safeguard was not the sovereign nation-state China as it is understood today, but instead the old Chinese socio-political order. However, a closer look at the Chinese order prior to the 20th century shows that it was hugely different from that of the seapowers of the age: the polity was a dynasty ruled by a Manchu autocratic emperor; the politics was characterised by a tug-of-war between

---

Western Technology' in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*, John K. Fairbank ed., (Cambridge: Cambridge University Press, 1978), p. 504.

[32] Hao and Wang, 'Changing Chinese Views of Western Relations, 1840-95', p.188-199.

[33] Erik Ringmar, 'Performing International Systems: Two East-Asian Alternatives to the Westphalian Order', *International Organization*, Vol. 66, No. 1, (Winter 2012), pp. 1-25.

[34] Youlan Feng, *中国哲学简史 Zhongguo Zhexue Jian Shi [A Short History of Chinese Philosophy]*, (Beijing: Peiking University Press, 1996), p. 163. Some scholars even go further to claim that "China is a civilization pretending to be a [nation-] state", see: Lucian W. Pye, 'China: Erratic State, Frustrated Society', *Foreign Affairs*, Vol. 69, No. 4. (Fall, 1990), p. 58.

central and local governments and strong provincialism; the dominant ideology was Confucianism; the society centred around the gentry i.e. Imperial Examination degree holders; the economy was overwhelmingly agrarian and self-sufficient, merchant class was disparaged. In short, the 'fundamental structure' that the Self-Strengtheners tried to defend with the steam navy in particular was categorically different from the aforementioned maritime states' pattern of national life.

Here lies the fundamental paradox of the Self-Strengthening Movement: a Western-style steam navy was adopted and was assigned the task of safeguarding the traditional Chinese order which was categorically different from that of the seapowers. The navy was expected to play the same role as the Great Wall – to ward off barbarians to protect the order inside it. However, the steam navy was far more complicated than bricks and mortar for only when a country became a seapower in the deep sense of the word can the might and sustainability of its navy be secured. What the Self-Strengtheners did not realise was that Western weaponry was the fruit of Western societies and needed a Western-style system to uphold. Navies are even more so. N.A.M. Rodger pointed out:

> '*Warships were … the most complex and advanced of all artefacts. To build and operate them requires a mass of technical, industrial and professional skills, ashore and afloat, and a sophisticated system to mould them into an effective whole. Above all it requires long-term commitment of sea power which cannot be improvised. Ships can be constructed relatively quickly, but the skills and the capabilities which make up an effective navy can only be built up with long years of investment.*'[35]

Due to the differences between the Qing Empire and the seapowers, the Chinese steam navy would be less likely to be strong in the 19th century China. The relation between the two, by analogy, was like Western scions transplanted onto Chinese trunks. The scions themselves were fully functional and had proven

[35] N. A. M. Roger, *The Safeguard of the Sea: A Naval History of Britain 660-1649,* (London: Penguin Books Ltd., 2004), p.105.

effective in seapowers. But their incompatibility with the new trunk – the 'fundamental structure' of the Qing Empire, affected the quality of the fruits. However, in war there was no prize for the runner-up; being not strong enough meant defeat.

1.4 Methodology

The main work of this thesis was carried out at four locations in London: the Maughan Library at King's College London for its collection of books on the study of seapower; and the library of the School of Oriental and African Studies with its comprehensive collection of first and second hand materials on Chinese history and the Self-Strengthening Movement; and the National Archives at Kew and Caird Library at the National Maritime Museum at Greenwich for access to historical archives, in particular Admiralty and Foreign Office records, which contain information on the Chinese naval education missions in England.[36]

Differed from older histories of the Chinese steam navy that tended to focus on operations and personalities, this research will focus on the relations between the navy and the 19th century Chinese system. To be more specific, how the elements of the Qing system's 'fundamental structure' affected the development of the steam navy. Admittedly uncertainties always play a part in any war, but outcomes are heavily influenced by the factors that are in turn determined by the state institutions. The voluminous treatises on seapower available in English literature disclosed the 'secrets' of the relations between maritime societies and naval strength. These studies provide this research with a map indicating from what angle the examination of the late 19th century Chinese societies should be conducted. They also provide this research with a lens through which some particular elements of the Qing Empire's 'fundamental structure' such as politics, economy and social ethos will be singled out and scrutinised.

Once the framework is set up, the second step is to understand how the

[36] There are also some records on the British-built warships sold to China in the Tyne and Wear Archives, New Castle, as the Chinese steam navy acquired a considerable number of warships from Armstrong Whitworth & Co. Ltd.

various aspects of the navy were shaped by the politics, economy and ideology of the late 19th century China. First hand materials played a vital role in this step. Qing China documents are highly varied in nature and enormous in quantity. To avoid drowning in the flood of historical archives, this research took the following approach. For the studies of policies and projects of the Self-Strengthening Movement, memorials to the Throne and Imperial Edicts are the fundamental sources.[37] These materials are found in the following compilations: (a) *Chouban Yiwu Shimo* (A Complete Account of the Management of Barbarian Affairs '筹办夷务始末') and compiled by the Palace Museum. It contains documents on China's dealing with the West in the early period of the Self-Strengthen Movement until 1874. (b) *Haifang Dang* (Archives on Maritime Defence '海防档') compiled by the Institute of Modern History. It provides records of policy-making on naval affairs. In particular, the Volume I contains the correspondences on the acquisition of ships and guns between the *Zongli Yamen* and the two key practitioners of maritime defence – Beiyang and Nanyang Superintendents of Trade as well as other relevant provincial officials. The Volume II contains records of the Fuzhou Navy Yard. (c) *Qingmo Haijun Shiliao* (Historical Materials on the Navy at the End of the Qing Dynasty "清末海军史料") compiled by the China Ocean Press. It collected a number of important memorials to the Throne and Imperial Edicts that shaped the Chinese steam navy. These memorials were reorganised thematically. (d) *Jindai Shiliao Congkan* (Collectanea of Materials on Modern Chinese History '近代史料丛刊') compiled by the Association of Chinese Historians. This is a broad collection of documents on modern Chinese history. In which the eight-volume documentary collection *Yangwu Yudong* (The Self-Strengthening Movement '洋务运动') is a rich collection of materials on the development of the Chinese steam navy.

A second source of first hand materials include: (a) the various posthumous collections of the writings of key officials of the Self-Strengthening Movement, such as that of Li Hongzhang (李文忠公全集), Zuo Zongtang (左文襄公全集), Shen Baozhen (沈文肃公政书), Zeng Guofan (曾文正公全集). These materials,

[37] The memorials to the Throne are reports to the emperor sent by imperial ministers, provincial leaders and other senior officials. This was the principle means of communication between the bureaucracy and the emperor in the Qing Dynasty. See Silas Hsiu-liang Wu, 'The Memorial Systems of The Ch'ing Dynasty (1644-1911)', *Harvard Journal of Asiatic Studies*. Vol. 27 (1967), pp. 7-75.

apart from contending official correspondence, sometimes include candid personal letters, which tell more of the inside stories and can be compared with the official documents to gauge the motivation of the memorials presented to the Throne; (b) personal diaries and biographies and of important historical figures, such as that of Yan Fu – one of the earliest students of the Fuzhou Naval Academy and later the Superintendent of the Tianjin Naval Academy (严几道年谱) and Guo Songtao – China's first ambassador to Britain (伦敦与巴黎日记).

A third source of first hand materials is third party observations. Many Westerners had worked in or alongside the Chinese steam navy, their memoirs sometimes contains information and comments about the Chinese steam navy. Such as Commander-in-Chief of the British China Station Adm. Sir E. R. Fremantle's memoir *The Navy as I have known It*; and British Royal Navy Officer Henry N. Shore's *The flight of the Lapwing: A naval officer's jottings in China, Formosa and Japan*; and *Pulling Strings in China* by William F. Tyler's who worked in the Beiyang Fleet; and *Through the Dragon's Eyes* by American naval officer L.C. Arlington's who served in the Nanyang Fleet. Most of these third party observations were objective and professional, they can be read together with the abovementioned two types of materials as important complementary materials.

1.5 Chapter Outline

Older research of the late 19th century Chinese steam navy tend to adopt a linear narrative approach that overly emphasised the battles and the personalities. Despite the advantage of this approach in elucidating the evolvement of the navy and telling the story of the build-up to the wars, it is less suitable for systematic analysis on how the various aspects of the navy was moulded and influenced by state institutions, which this research wishes to disclose. In order to do so, this dissertation will consist of the following seven chapters: Chapter one being the introduction; Chapter two a review of the 'fundamental structure' of the Qing Empire against the theories of seapower; Chapters three to six constitutes the main body of the thesis and will examine in greater detail the various aspects of the Chinese steam navy in the light of the 'fundamental structure' set out in

Chapter two; and Chapter seven will form the conclusion of this dissertation.

In Chapter two, the 'fundamental structure' of the Qing Empire will be broken down and examined from three dimensions: the political dimension, the economic dimension and the ideological dimension. In each of these dimensions, an analysis of the 'secrets' of naval success will be followed by a narrative of the situation of China, which will reveal to what extent the Qing Empire's 'fundamental structure' was different from that of seapowers. Chapter two lays the foundation of detailed analysis, which will be carried into Chapters three to six.

Chapter three will focus on the impacts of the system on the politics of the Chinese steam navy, specifically: (a) the emperor and the ministers in the Imperial Court; (b) the provincial Self-Strengtheners; and (c) the contending views of the strategic significance of the steam navy. Chapter four will investigate the impacts of the system on the officer corps of the Chinese steam navy, specifically: (a) recruitment of naval cadets; (b) naval academies; (c) advanced naval education; and (d) senior officers of the navy. Chapter five will investigate the impacts of the system on the hardware of the Chinese steam navy, specifically: (a) various types of home-built ships; (b) decline of Chinese indigenous shipbuilding capability; and (c) China's naval acquisition from abroad. Chapter six will investigate the impacts of the system on the use of naval power, specifically: (a) Chinese military traditions and their influences on the use of naval power; (b) the formation of the four regional fleets and the subsequent defeat of the Fuzhou Navy Yard Fleet during the Sino-French War; and (c) the establishment of the Chinese Board of Admiralty (the *Haijun Yamen*) and the defeat of the Beiyang Fleet in the First Sino-Japanese War. Chapter three to six will offer a panoramic explanation on how the Chinese steam navy was adversely affected by the Qing Empire's 'fundamental structure', and was eventually defeated.

Chapter seven will be the conclusion of the dissertation. It will reiterate the central argument of this thesis – that the incompatibility between the state institutions based on the 'fundamental structure' of Qing Dynasty China and the requirements of a Western-style steam navy, was the cause of the failures of the Chinese steam navy. It will also review the abortive efforts made in the aftermath

of the Self-Strengthening Movement to reform the 'fundamental structure' of the Qing Empire, and try to understand the naval failures within the context of the state's failure to reform. This hopes to disclose the deeply rooted reasons for the Qing Empire's inertia to change, and to show that the problems that caused China's weakness at sea could not have been solved overnight.

Chapter Two

The 'Fundamental Structure' of the Qing Empire

This chapter lays the foundation of this dissertation. It will try to explain what the 'fundamental structure' of the Qing Empire consisted of, and reveal the incompatibility between the Qing Empire's 'fundamental structure' and the requirements of a steam navy. This dissertation believes that the 'fundamental structure' i.e. the 'social imperative' in Huntington's terms and the 'living conditions' in Jiang's terms consisted of three main aspects: politics, economy and ideology (see Figure 2.1).

Then, how does one assess the compatibility between the Qing Empire's 'fundamental structure' and the requirements of a steam navy? In this dissertation, this compatibility is expressed in terms of naval administrative efficiency in the political dimension, by the quantity of resources available to navy in the economic dimension and by social willingness to support a navy in the ideological dimension. As a first step, this chapter will explain how, with regard to navy, high administrative efficiency, abundance of resources and strong social support can be attained more generally. Afterwards, this chapter will juxtapose the 'fundamental structure' of the Qing Empire with that of seapowers in each dimension, and argue why these requirements for a steam navy could not be attained by the Qing Empire.

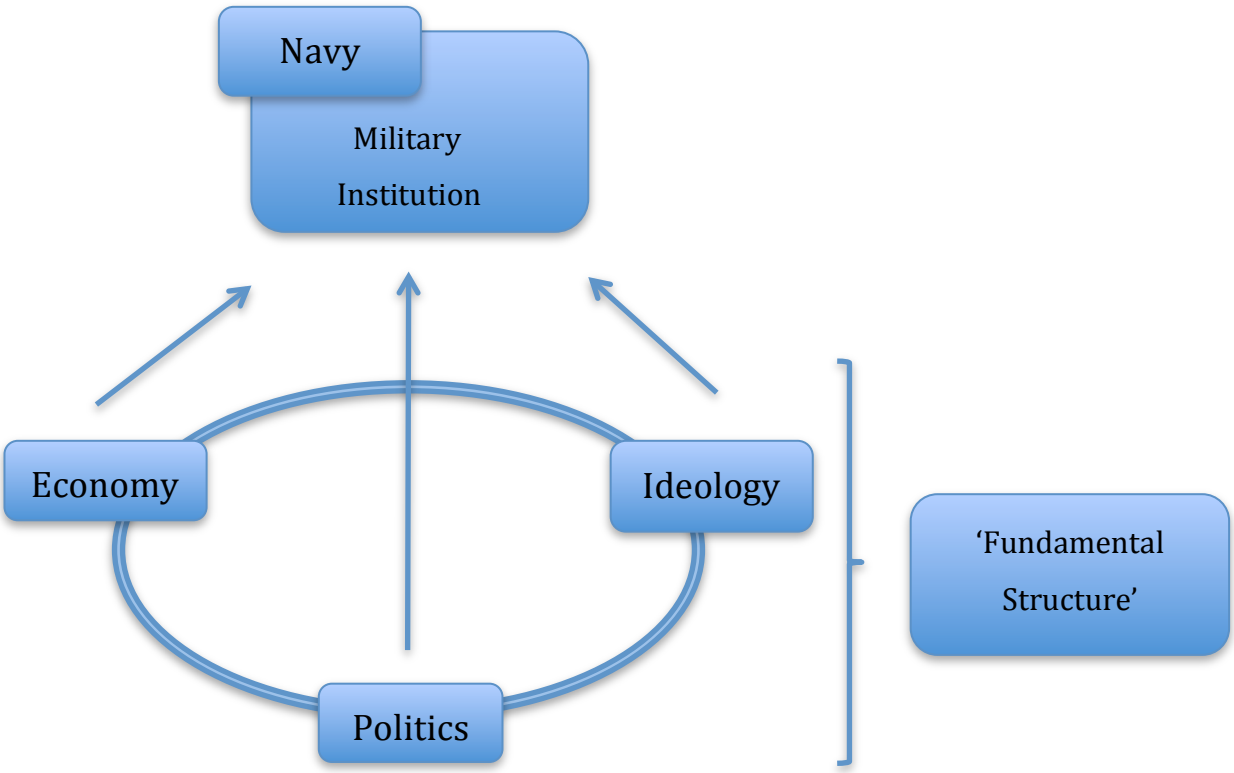


Figure 2.1 A schematic of the 'fundamental structure' of the Qing Empire and its relations with the steam navy. The 'fundamental structure' consisted in three main aspects: politics, economy and ideology. Politics determined the administrative efficiency of the navy; economy determined the amount of resources available for the development of the navy; ideology determined the society's willingness to support the navy.

2.1 The Political Dimension

In this dimension we are going to look at the relations between a nation's form of governance and its impact on naval administrative efficiency. Mahan pointed out that '*particular forms of government with their accompanying institutions, and the character of rulers, at one time or another, have exercised a very marked influence upon the development of sea power*.'[38] Generally speaking, powerful navies were associated with representative governments. Lambert offered an explanation:

[38] Mahan, *The Influence of Sea Power Upon History*, p. 58.

'*In absolutist regimes the personal wishes of the monarch prevailed. Often prestige was more important than fighting strength, although the two requirements were not necessarily mutually exclusive. Republics and constitutional monarchies proved better able to sustain naval power, for the politics of such states reflected the interests of several groups that benefited from naval strength: merchants, coastal towns, colonial speculators and investors. That these states also tended to be maritime indicates a strong link between the economic life of the nation and the political system it develops. Through the power of purse, these groups determined what type of navy was maintained and often how it was used.*'[39]

However, it cannot be claimed that nations whose political systems were not in conformity with the principles of republics and constitutional monarchies could not have powerful navies at all. Some strong navies in history have emerged from countries and regimes hardly noted for their adherence to democratic principles. As Mahan observed: '*... despotic power, wielded with judgment and consistency, has created at times a great sea commerce and a brilliant navy with greater directness than can be reached by the slower process of a free people.*'[40] There is, indeed, ample evidence to support Mahan's point. Countries with an agrarian economy and/or absolutist political system such as England under Henry VIII and Tsarist Russia under Peter the Great had all achieved considerable naval strength. This is because absolutist regimes were sometimes more adept at mobilising resources than representative governments, and could therefore amass relatively greater resources to boost naval strength in a relatively shorter time. However, navies supported by and dependent on absolutist power are usually less sustainable because '*... despots come and go and these achievements have often died with them*.'[41]

Key to a really powerful navy consists not only in the amount of resources one can mobilise and invest in it, but equally importantly on the sustainability and cost-effectiveness of the investment. As Till argues:

---

[39] Andrew Lambert, *War at Sea in the Age of Sail,* (London: Cassell & Company Ltd, 2000), p. 25.
[40] Mahan, *The Influence of Sea Power Upon History*, p. 58.
[41] Till, *Seapower,* p. 86.

'*… it is not liberalism and democratic principles in themselves that were, and are, decisive in the long-term development of seapower, but administrative efficiency in raising money and other resources, and in spending it wisely. But, as a very general rule, these qualities do seem to have been particularly associated with freer, stable, more mercantile styles of society and government.*'[42]

One of the important reasons why high naval administrative efficiency was more attainable in representative governments than in absolutist regimes was that the former usually allowed a higher degree of delegation of power to professional bodies, whilst the latter were usually reluctant to do so. Such delegation of power ensures that a navy can be more efficiently aligned with the resources it needs in peacetime and more competently commanded in wartime. Taking the English (later British) navy for example, in the decades following the Glorious Revolution, the navy was transferred from the hands of the monarch to the control of Parliament and the Admiralty. This was considered as a watershed in the nation's naval history. Prior to this point, the success of the navy was mostly due to the enthusiasm of England's navalist kings.[43] After this point, naval success was derived from the efficacy of the system. The Admiralty, as Baugh observed, was an authoritative body of high administrative and commanding efficiency to which all other braches of naval administration reported. It was a '… *permanent, authoritative centre of accumulated naval expertise* …' yet it wielded strong influence in state affairs since the First Lord of the Admiralty was a member of the cabinet.[44] With respect to the Parliament, Rodger noted:

'The importance of 1689 to naval history was not that Parliament created English seapower, but that it began to take it over … it mattered very much that the Navy and the money finished up together in the hands of

[42] Till, *Seapower,* pp. 86-87.
[43] Jon Sumida, *In Defence of Naval Supremacy: Financial Limitation, Technological Innovation and British Naval Policy, 1889-1914,* (London: Routledge, 1993), p. 3.
[44] Daniel Baugh, 'The Eighteenth Century Navy as a National Institution' in *The Oxford Illustrated History of the Royal Navy,* J. R. Hill and Bryan Ranft eds., (Oxford: Oxford University Press, 1995), p. 122.

the House of the Commons. …

[In contrast to the crown's government] *Parliament's government was … highly centralised and precociously professional. Here were found the Treasury and the revenue-collecting departments, especially the Customs and Excise, and here too was the Navy … The location of the main revenue-raising and revenue spending departments on the efficient, Parliamentary side of the British government is one of the most distinctive and important feature of British constitutional development. Because Parliament captured the Navy, it was able to realise the character of British sea power as the ideal expression of the nation in arms … It made the Navy an expression of the liberty of the people, where the army was an expression of the power of the crown. The Stuarts could never have done this, however wisely they had managed the Navy.'* [45]

This being said, our discussion of the relations between political systems and administrative efficiency should not be simplistic and naval-centric. The navy was not always the top priority on all nations' strategic agendas. Different nations had different ambitions or were confronted with different threats that might require different types of forces to address. Here geography should be taken into the equation for naval strength, because it determines a country's strategic agenda. Kennedy echoed Mahan on the impact of geography on a country's naval strength: '… *a state which had neither to defend nor to extend itself by land was much more favourably placed to concentrate upon the growth of its sea power than one which was compelled to stay prepared against land neighbours …'.*[46] Insular countries had particularly favourable conditions to develop navy because they can safeguard territory and expand interests overseas with the same force. However, there were not many insular countries; most countries had a shared border with their neighbouring countries, and some countries had a frontier with a hostile neighbour, which necessitated a large standing army.

[45] N. A. M. Roger, *The Command of the Ocean: A Naval History of Britain, 1649-1815*, (London: W.W. Norton & Company, 2004), pp. 578-579.
[46] Kennedy, *The Rise And Fall of British Naval Mastery*, p. 5.

The need for a large standing army had an adverse impact on naval power. This was not only because the two had to compete with each other for a share of the budget and manpower from time to time. More importantly, the two were suited to different forms of governance, for efficient mobilisation of the army and efficient mobilisation of the navy required different political systems. Rodger drew the following conclusion from a comparison of the political systems preferred by armies and navies:

> '*absolutist monarchy was essentially a system of government for mobilizing manpower rather than money. More efficient in its way than the medieval constitutions it replaced, it was poorly adapted to meet the much greater strains imposed on the state and society by a modern navy. For that, it may be suggested, what was needed was a system of government which involved the participation by those interest groups whose money and skills were indispensible to sea power – not just the nobility and peasantry whom absolutism set to work, but investors and managers, the skilled craftsmen; all the classes in short, which absolutist government least represented and least favoured. The demands of sea power were not only greater in themselves, but fell upon a much wider cross-section of society, and required a much greater degree of social, political and administrative integration than armies did. A military regime could sustain itself by force, but a navy had to earn public support. Autocracy was adequate for an army, but navies needed consensus.*'[47]

In this sense, the needs for a large army would, to an extent, justify the absolutist political system, and therefore inhibit the development of navy. For an insular country that enjoyed favourable geographical conditions that exempted it from the need to maintain a large army, the navy could be given a central role and a democratic system favoured it. For countries that needed to protect themselves with a large army, the navy usually received secondary importance and an absolutist government was the preferable form of governance.

---

[47] N. A. M. Roger, *The Safeguard of the Sea: A Naval History of Britain 660-1649,* (London: Penguin Books Ltd., 2004), p. 432.

***

The Qing Empire's security agenda revolved around the goal of perpetuating autocratic Manchu rule.[48] The Qing emperors, in particular those of the 18th and 19th century, were absolute rulers, and it is generally agreed that the Qing Dynasty had the highest level of autocracy in Chinese history. The Grand Council was the institution that guaranteed the Qing emperors' absolute power. The Grand Council was originally an imperial institution designed to increase efficiency and confidentiality in communication between the emperor and his senior military commanders, but later evolved into a mechanism to ensure direct communications between the emperor and senior officials.[49] In the Qing Empire, all senior officials, including provincial leaders, were empowered to write memorials to the Throne. This was a system of communication through which these officials reported to the emperor personally and directly. The Grand Council ensured that the communications between the emperor and the senior officials to be carried out confidentially: the reports were to be opened by the emperor in person and instructions were to be returned directly to the senders. Imperial governmental bodies were largely bypassed and were therefore excluded from the decision-making of important state affairs. Even the grand councillors themselves theoretically had no right to advise the emperor.

This administrative system helped the emperor to keep state affairs in absolute control, but had also inevitably made the Qing emperors entangled in micro-management activities, which made it almost impossible for them to

---

[48] One particularity of the Qing Dynasty that is worthy of mentioning is that different from most of the previous Chinese empires the Qing Dynasty was an alien dynasty – it was ruled by the Manchus rather than the Han Chinese. The latter took the majority of the Chinese population and had developed a relatively more advanced political, economic and ideological system. The former, an ethnic minority, was originally a nomadic people from north-eastern China. The Manchus conquered China in 1644 and established the Qing Dynasty, but they had to rely on the Han Chinese for the administration of the empire. In order to win the cooperation of the Han Chinese, the Manchus identified themselves with most of the Han Chinese traditions, kept the traditional Chinese governmental institutions, embraced Confucianism as a state ideology, and absorbed the Han Chinese into its bureaucracy to work alongside with the Manchus. On the other hand, the Manchus strived to maintain their superiority over the Han Chinese and kept a separated Manchu identity. This particular factor of Manchu rule had had profound impacts on many aspects of the Qing Empire, which will be mentioned later in this thesis. Mark Elliott, *The Manchu Way: The Eight Banners and Ethnic Identity in Late Imperial China*, (Stanford: Stanford University Press, 2001), p. 3.

[49] For more details about the Grand Council and its evolution, see Hsü, *The Rise of Modern China*, pp. 47-51.

continuously focus on any specific issue. The Qing emperors were diligent and devoted men who in fact performed functions of an entire group of cabinet ministers, Hsü observed:

> '*In* [the emperor's] *executive capacity he decided all important state policies, made appointments, conferred titles, approved promotions, demotions and dismissals, awarded pensions, commanded the army, and ratify treaties with foreign powers. As supreme legislator he enacted, annulled, and amended laws by decrees and edicts. Judicially, he was the highest court of appeal, granting pardons and reprieves as a mark of favour. Indeed, the highest form of absolute monarchism was reached under the Ch'ing* [the Qing Empire].'[50]

If the volume of memorials to the Throne was still manageable to the emperors themselves in the 18th century, it was hardly the case anymore in the 19th century, when the scale of state affairs became increasingly complex as the empire was confronted with internal and external crises.[51] There was good reason to doubt the efficiency – if not effectiveness too – of the decision-making carried out in such form. H. Mao commented:

> '*relying on one person's intellectual capacity to make decisions on huge amount of state affairs in a short time, requires not only great talent and bold vision, but also precise and sophisticated planning. Moreover, physical and intellectual strength was vitally important too. According to archives, we can learn that Qing emperors had to read and reply memorials totalling more than ten thousand words on a daily basis, as well as making a series of corresponding decisions. Even minor mistakes could be very consequential ... it was impossible ... to make decisions on an*

---

[50] Hsü, *The Rise of Modern China*, pp. 45-46.

[51] For instance, during the thirteen years of his reign (1723-1735), the Yongzheng Emperor dealt with a staggering number of memorials to the Throne. There are around 33,000 memorials extant today, and the actual number should be much lager than this. See Mark C. Elliott, 'The Manchu-Language Archives of the Qing Dynasty and the Origins of the Palace Memorial System', *Late Imperial China*, Vol. 22, No. 1, (Jun. 2001), p. 36.

analytical, deliberative and rational basis….'[52]

This arrangement ensured the emperor's exclusive control of state affairs. However, from a naval point of view, this decision-making mechanism established the emperor as the barrier between the navy and the resources it needed to flourish. This mechanism excluded the social group whose interests were hinged on maritime successes from the decision-making process, and determined that if there was to be any impetus to build a strong navy it had to come from the emperor himself. However, Chinese economic, ideological and security realities determined that it was highly unlikely that China could have devoted navalist emperors.

The administrative and military commanding system of the Qing Empire was structured to prevent the emperor's absolute power from being challenged by individuals or bureaucratic bodies. In spite that there were, from time to time, powerful statesmen that wielded considerable influence on state affairs; no individual or bureaucratic body ever achieved institutionalised power or interfered with the wishes and decisions of the emperor. Prince Gong, who helped the Empress Dowager Cixi to become the *de facto* ruler of China from 1861 to 1908, had the power and the will to promote a Western-style steam navy; but he was chastised for having too much power and did not succeed in becoming an effective promoter of the steam navy. In the Imperial Court, there was no prime minister, and the nominal cabinet – the Grand Secretariat was only titular.[53] The Grand Council was the bureaucratic body closest to the emperor, but it was not comparable to a Western-style cabinet office in terms of power. The grand councillors were concurrent appointees, and they did not serve for definite tenures.[54] This meant that when threatened or questioned by a grand councillor, the emperor could have him removed without having to refer to any

[52] Haijian Mao, *天朝的崩溃：鸦片战争再研究 Tianchao de bengkui: Yapian zhanzheng zaiyanjiu [The Collapse of the Heavenly Kingdom: Rethinking the Opium War]*. (Beijing: Sanlian Shudian, 1995), p. 170.

[53] In the early 18th century, the Grand Council pre-empted the power of the Grand Secretariat. Before the Grand Secretariat lost its power to the Grand Council, there were four grand secretaries and two associate grand secretaries to advise the emperor. However, there was no leader among them, and they were not allowed to issue orders directly to the Six Boards or to the provincial governments. Only the emperor could do that. Hsü, *The Rise of Modern China*, p. 36, 47-48, 51.

[54] Ibid., 50.

legal framework.[55]

It was particularly noteworthy that the two most important central bureaucratic bodies of the Self-Strengthening Movement, the *Zongli Yamen* – the Chinese Foreign Office founded in 1861 – and the *Haijun Yamen* – the Chinese Board of Admiralty founded in 1885 – were modelled on the Grand Council. These two bureaucratic bodies only had very limited bureaucratic power and therefore should not be considered as equivalent to Western foreign offices and naval ministries. For instance, the *Zongli Yamen* had no constitutional basis. It was placed under the charge of a prince of the blood, who was usually supported by a handful of ministers who were concurrently metropolitan officials. Theoretically, the *Zongli Yamen* only concerned itself with the execution of foreign policy, not the making of it, as the ultimate decision-making power remained in the hands of the emperor.[56] Largely for the same reason, the *Haijun Yamen*, which had only existed for ten years between 1885 and 1895, was even more powerless.

The Six Boards – the Board of Civil Office, the Board of Revenue, the Board of Rites, the Board of War, the Board of Punishment, and the Board of Public Works constituted the main governmental body of the Imperial Court. However, the six boards had very little real power and only operated within the constraint of traditions. Therefore, they should not be considered as the full equivalents to the state ministries of Western governments. As Horowitz observed:

> *'within their areas of activity, the Qing Six Boards had limited powers. They could not, for example, issue orders directly to provincial-level officials, or equivalent-level central government organs. To implement their decisions they needed either voluntary cooperation on the part of other officials or an imperial edict to force the issue… Even small reforms were difficult to implement …. Introducing systemic reforms required an*

[55] Hsü, *The Rise of Modern China*, p. 50.

[56] The *Zongli Yamen* engaged not only in foreign affairs but also in a number of modernisation projects, such as the promotion of modern schools, Western science, industry and communication, etc. These projects were considered as *Western learning* and were therefore confined to the Zongli Yamen and quarantined from the rest of the bureaucratic bodies that focused on Chinese learning. Hsü, *The Rise of Modern China*, pp. 268-296.

extraordinarily broad consensus of officials, or the strong hand of a reforming emperor.'[57]

It can be concluded from this brief review of the Qing Imperial Court that the power of imperial ministries was pre-eminently nominal and conditional to imperial oversight. The emperor concentrated almost all decision-making powers in his hands. In the absence of a Western-style separation of powers, the navy was not represented in the decision-making in the Imperial Court. Unless the emperor himself wanted to build a strong navy, it would be impossible for the naval sector to get support from the central government.

A steam navy did emerge; but it came from the provincial authorities rather than the Imperial Court. In spite of the emperor's successful attainment of monopoly of power within the Imperial Court, the authority between the central and provincial governments ebbed and flowed with the central government not always in absolute control. The relations between the central and local governments were characterised by a fundamental contradiction: on the one hand, the Imperial Court had to rely on provincial authorities for administration for the authority of the emperor was not able to reach far at a high efficiency in the absence of advanced means of communication. On the other hand, the central government tried to prevent the local authorities from attaining too much power for fear of regional power centres forming that might challenge the authority of the Imperial court. Preventing the local authorities from becoming too strong was the main concern of the central government's policy towards the provincial authorities.[58]

---

[57] Richard Horowitz, 'Breaking the Bonds of Precedent: The 1905-6 Government Reform Commission and the Remaking of the Qing Central State', *Modern Asian Studies*, Vol. 37, No. 4 (Oct., 2003), pp. 779.

[58] Shaofang Chen, '清代地方官治行政的传统特征 Qingdai Difang Guanzhi Xingzheng de Chuantong Tezheng [The Traditional Characteristics of Local Administration and Bureaucracy in Qing Dynasty]', *求索 Qiu Suo [Seeker]*, No. 7, (Jul. 2006), pp. 219-222.

Map 2.1 A Map of administrative division of the Qing Empire. Apart from a handful of special administrative areas such as Mongolia, Manchuria and Tibet, the Qing Empire had a total number of eighteen regular provinces. These eighteen provinces were: Zhili, Shandong, Shanxi, Henan, Jiangsu, Anhui, Jiangxi, Zhejiang, Fujian, Hubei, Hunan, Shaanxi, Gansu, Jiangsu, Sichuan, Guangdong, Guangxi, Yunnan and Guizhou. Later in 1884 and 1887, Xinjiang and Taiwan were made provinces respectively. The eighteen regular provinces were put under a dual control of governors-general and governors, totalling eight and fifteen respectively.[59] Two of the former controlled only one province each – Zhili and Sichuan, while the remaining six had jurisdiction over two to three provinces. These were: governor-general of Liangjiang (Jiangsu, Anhui and Jiangxi), Minzhe (Fujian and Zhejiang), Liangguang (Guangdong and Guangxi), Huguang (Hubei and Hunan), Shangan (Shanxi and Gansu), and Yungui (Yunnan and Guizhou).[60] The purpose of this dual control system was to make the governors-general and governors to counter-balance each other.[61]

[59] The number varied from reign to reign in the Qing Dynasty, but did not change significantly.
[60] Hsü, *The Rise of Modern China,* p. 55.
[61] The imperial Court also derived a sense of security from maintaining a subtle balance between the Manchus and the Han Chinese in the provincial offices. According to a statistic, 57 per cent of the governors-general and 48.4 per cent of governors were Manchus, compared with 43 per cent and 51.6 per cent, respectively, Han Chinese. Ibid.

Yet, another important characteristic of the political landscape of the Qing Empire was that there was strong sense of provincialism. For most of the time in the Qing Dynasty, China had eighteen provinces and a handful of special administrative areas (see Map 2.1). The unification of the empire had been the paramount concern for the emperor, for unity meant peace. Yet the vastness and diversity of the empire often tended to result in disunity. The eighteen provinces that constituted China proper were divided by geography into clearly demarcated regions. Also, almost all provinces had agriculture as the pillar of the economy. In spite of variance in agricultural productivity, most of them were comparatively self-sufficient. These politico-economic conditions resulted in a tradition of minimal interdependence between the various provinces. Local interests were usually the paramount concern for provincial officials, resulting in the provincialism in Chinese political practice. These two features: the tug-of-war for power between the Imperial Court and provincial governments, and the provincialism among local leaders had characterised the political landscape of the empire.

Before continuing our discussion of politics, it is necessary to make a brief detour to discuss the military. The military was shaped by the political dynamics, and it also played a substantial role in affecting them.

The vast territory of the Qing Empire required a large standing army for defence. In comparison with previous Chinese dynasties, the Qing Empire's need of a large army was even greater because it not only had to defend its borders, it but also had to defend the hinterland as well: the Manchu regime was threatened from within by Han Chinese anti-Manchu sentiments, which from time to time developed into armed uprisings.[62] A standing army – the Green Standard Army – as large as 600,000 men was maintained.[63] In fact, to the Qing Dynasty, the

[62] Marianne Bastid-Bruguiere, 'Current of Social Change'in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 594.

[63] There was another branch of army in the Qing Empire – the Eight Banner Army. This was an army mostly consisted of Manchus and it totalled approximately 200,000 men. This army was structured differently from the Green Standard Army. It was allowed to have a higher degree of concentration (though it still was subject to checks and balances from within) because most of the soldiers and commanders were Manchus and many of its leaders were remote relatives of the emperor. The Eight Banner Army was more trusted by the Qing emperors and they symbolised the Manchu rule of China. Elliot pointed out that the Banner troops 'were to inspire fear and submission in Chinese population'. While 'as a supplement force to the Eight Banners, the Green Standard Army fulfilled a Qing wish to "use Han [Chinese] to rule Han [Chinese]".' Elliott,

threat from within was much greater than that from without, and the need to put down internal revolts had shaped the empire military agenda. H. Mao observed that the armed forces of the Qing Empire played three roles at the same time: a national defence force, an internal garrison force, and a police force. Of these three roles, the Qing armed forces were more of the third than the first.[64]

At the same time, the army was considered as a potential threat *per se*, since most of the previous Chinese dynasties were not overthrown by foreign invasions but by revolts from within. Therefore, the Qing armed forces were structured to prevent military commanders from being able to concentrate too many troops under their command. There was no general-in-chief at a national level, the ranks of military officers went up no higher than provincial commander-in-chief, so that no military commander would be able to expand his sphere of influence beyond his province. Senior provincial military commanders had had relatively small formations of troops placed under their direct control; the majority of the troops were dispersed among numerous garrison posts and played a largely constabulary role. As Lococo Jr. wrote, '*the Green Standard Army was extremely fragmented, with literally thousands of large and small outposts throughout the empire, many with as few as twelve men*.'[65]

Also, the provincially structured armed forces were placed under the control of civil officials and adopted a defensive posture. A key reason behind this arrangement was also to 'tame' the military:

> '*From the point of view of Chinese officialdom, a passive defence policy had the advantage of making it easier to assure civilian dominance in China. An army that was assigned to garrison duty and seldom to the field for active campaigning could be kept in leading-strings by carefully regulating its flow of supplies. Civilian officials, charged with the duty of*

The Manchu Way, pp. 128-129. The Banner Troops gradually became too slack and corrupt to fight since the early 18th Century, and played only a symbolic role thereafter. Also see Mao, *The Collapse of the Heavenly Kingdom*, p. 52.

64 Mao, *The Collapse of the Heavenly Kingdom*, p. 53.

65 Paul Lococo Jr., 'The Qing Empire' in *A Military History of China*. Updated Edition, David Graff and Robin Higham eds., (Lexington: University Press of Kentucky, 2012), p. 122. It was observed that '*the military system of the various provinces is not the same. The discipline is not uniform, and rations and weapons differ. The drills are so disparate that in time of peace there is no communication between various provincial army units and in time of war there is neither cooperation nor coordination. It is therefore very difficult to achieve military success.*' Li, *The Political History of China, 1840-1928*, p. 214.

providing food and weapons to local military commanders, could in any dispute expect to balance one military leader off against another. This made it relatively easy to nib the rebelliousness in bud, should any military captain find himself tempted to bring armed forces to bear on decision-making on imperial headquarters.'[66]

These characteristics made the Qing Empire's military very inefficient and cumbersome.[67] China in the 19th century was troubled not only by the First and the Second Opium Wars, but also by a series of internal upheavals and revolts. The Taiping Rebellion was the largest among them. It lasted from 1850 to 1864 and spread over sixteen provinces and destroyed nearly six hundred cities and towns. The Nien Rebellion was the second largest. It lasted from 1851 to 1868 and spread over eight provinces. The standing army of the Qing Empire had great difficulties in tackling these rebellions, which nearly succeeded in overthrowing the Qing Empire.

The Qing Empire survived, but its survival came at a price. A twofold major change took place and transformed the political landscape of the empire. The first major change was that the provincial governments gained the upper hand in the central-local tug-of-war for political power; decentralisation became a key feature of the power relations between the central and local governments.[68] In the early and middle periods of the Qing Dynasty, the Imperial Court usually had the last word in national affairs. However, during the turmoil of the 19th century, the Imperial Court's financial power was exhausted, and the status of emergency forced it to hand over military and financial authorities to provincial governments. The autonomy of provincial governments increased as a consequence, and they retained it in the years that followed. In the post-Taiping period, the central government declined and the provincial power rose.[69] The

---

[66] William McNeill, *The Pursuit of Power: Technology, Armed Force, And Society Since A.D. 1000*. (Chicago: University Of Chicago Press, 1982), p. 34.

[67] For more details about the ineffectiveness of the Green Standard Army in the Opium Wars see Mao, *The Collapse of the Heavenly Kingdom.* For more details of the degradation of the Green Standard Army see Ergang Luo, *绿营兵制 Luying Bingzhi [A History of the Green Standard Army],* (Beijing: Zhonghua Shuju, 1984), p. 73.

[68] Hao Chang, 'Intellectual Change and the Reform Movement, 1890-8', in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 316.

[69] Hsü, *The Rise of Modern China,* pp. 251-252.

degree of decentralisation of power increased, with the Imperial Court wishing to restore the old order.

A second major change was the emergence of a new group of bureaucrats, and many of them became leading figures of the Self-Strengthening Movement. The military forces that saved the Qing Empire from the mid-19th century turmoil were not the standing army, but a new type of army – the local militias. The Xiang Army, the Huai Army and the Chu Army were the most representative ones among of this type of army. Unlike the standing army, these local militias had a more efficient organisational structure and held a more positive attitude towards Western weapons. These differences made them more powerful and eventually allowed them to crush the rebellions. However, because of these very differences, the Imperial Court considered these local militias as a potential threat. A majority of the local militia armies were dissolved after the war, while some leaders of these forces were awarded provincial offices. For example, Zeng Guofan, leader of the Xiang Army was appointed as governor-general of Liangjiang, Li Hongzhang, leader of the Huai Army, became the governor of Jiangsu and Zuo Zongtang, leader of the Chu Army was made governor of Zhejiang. These former local militia leaders, now provincial leaders, embarked on the Self-Strengthening Movement, and they were joined by many of their former subordinates who saw the Self-Strengthening Movement as their new *raison d'être*.

The Self-Strengthening Movement was therefore initiated at a provincial level. At this moment, it is necessary for us to review the political dynamics of the Qing Empire. First, the emperor was an autocratic but not a navalist ruler. He held a monopoly on power in the Imperial Court and tended to not tolerate any individual or bureaucratic body that had alternate authority. Second, the relations between the central and local governments were characterised by a tug-of-war for power, in which the provincial authorities gained the upper hand because of the turmoil of the mis-19th century. This only intensified as the Imperial Court attempted to regain control. Third, the relations between the provinces were characterised by provincialism with the provincial leaders regarding local interests as their primary concern in decision-making.

This political landscape affected the development of a Chinese steam navy in

several ways. First, there lacked central direction and planning. The provincial promoters of naval modernisation had limited resources and capabilities, yet the work done in the various provinces were characterised by low-level and obsolete development attempts, which only further lowered the cost-efficiency of naval development. Second, The building of the navy enjoyed little support from the Imperial Government; on the contrary, the central government was reluctant to see the growth of provincial power. Third, the provincial promoters of naval modernisation tended to compete rather than cooperate with each other, because the Self-Strengtheners themselves saw any achievement as foundation for their own personal power.

2.2 The Economic Dimension

In this dimension we will discuss the how a nation's economy impacted on the amount of resources it can supply to its navy. To begin with, two types of power and their different requirement of resources should be distinguished. The strength of a continental power was usually determined by the size of its army, whereas the strength of a seapower was usually determined by the quantity and quality of its warships. Armies and navies differed in terms of the resources they required: the former is manpower intensive, whereas the latter is a capital and technology intensive. Different types of power required different forms of economies to sustain them. Agrarian economies suited continental powers better because they could easily provide food to upkeep a large population, from which a large armed force could be expected. Trade suited seapowers better because it was effective in nurturing capitalism and industrialisation, from which a strong navy could be expected.

Agrarian economies could have deleterious effects on the growth of naval power, because agriculture pinned manpower down to land, and discouraged the development of seafaring communities. In comparison with seaborne trade, agriculture was a more stable and secure way to meet the needs of life. Therefore, agrarian nations usually had less impetus for seafaring. The examples of England and France illustrated this point. A principal reason for the French people's lack

of eagerness of seagoing, as Mahan observed, was that '*... the physical conditions ... have made France a pleasant land, with delightful climate, producing within itself more than its people needed.*'[70] England on the other hand: '*... received from nature but little ... Their many want ... led her people abroad ... between products and colonies shipping is the inevitable link. So their seapower grew.* '[71]

Seaborne trading nations supported navies better not only because they attached greater importance to it, but also, in such societies navies could find a suitable socio-economic basis in which to flourish. G. Till observed:

> ' [merchant ships] *are merely the outward sign of a vast maritime system that also includes shipbuilding and repair, the fisheries, ports and land communications, maritime insurance and a capitalist infrastructure to underpin the whole. The eighteenth-century Royal Navy may have been the biggest industrial enterprise in the world but it depended absolutely on the health of the maritime economy in general and on the skilled seamen, navigators, shipwrights and artisans, shipyards and material supplies associated with the merchant shipping industry in particular*.'[72]

Till further explained how the maritime economy could benefit a navy. First, it could devote huge resources to building and maintaining a fleet but at less real cost. Second, it supported, from the profits of trade, access to a mass of industrial and technological developments. Third, it could be translated into specific military advantages (e.g. Britain's technological edge of ship bottom copper-sheathing technique over that of France).[73] In this sense, even if an agrarian economy had the will to build a navy, its socio-economic foundation would make it unlikely that it would be able to produce such achievements.

At this point, a particular aspect of national economy – the capability of mobilising social capital should be discussed. Marx noticed the close relations between seapower and capitalist financial infrastructure:

---

[70] Mahan, *The Influence of Sea Power Upon History*, p.36.
[71] Ibid., 36-37.
[72] Till, *Seapower,* p.102.
[73] Ibid., 35.

> '*The system of public debt, i.e. of national debts, whose origin we discovered in Genoa and Venice ... The colonial system with its maritime trade and commercial wars served as a forcing-house for it. Thus it took first in Holland.*'[74]

Such financial infrastructures as national debts were very effective in absorbing surplus mercantile capitals from society and pumping them into naval coffers when required. Many powerful navies in the world had benefited from it. Kennedy claimed that the creation and the growth of financial institutions such as the Bank of England and the Stock Exchange and the establishment of National Debt '*not only knit the Treasury and financiers together, but also provided the capital for overseas ventures and for expensive wars*'.[75] Lambert argued that these financial infrastructures ensured the English (later British) Royal Navy the financial strength to rule the waves.[76] The development of the French and German navies also benefited from such financial infrastructures, as well as the Japanese Empire.[77] In 1882, the Japanese central bank, the Bank of Japan, was opened. In 1886, the Meiji government issued its first public bonds specifically earmarked for naval expansion. These financial infrastructures greatly facilitated the development of Japanese naval power.[78]

Mobilisation of social capital was more likely to be efficient in societies characterised by democratic principles. It was obvious that capitalists would be less willing to lend their money to a government in which they had no say in the decision-making. Both the Bank of England and the British National Debt were established in the aftermath of the Glorious Revolution, which marked the commencement of a constitutional monarchy in England. These financial infrastructures transformed the navy from the King's navy to the state's navy. The monied classes no longer considered the navy as an undertaking irrelevant

---

74 Karl Marx, *Capital*, Vol. 1, (London: Penguin, 1981), p. 919.
75 Kennedy, *The Rise And Fall of British Naval Mastery*, p. 71.
76 Lambert, *War at Sea in the Age of Sail*, p.14.
77 Sumida, *In Defence of Naval Supremacy*, p. 7.
78 Mark Metzler, *Lever of Empire: The International Gold Standard and the Crisis of Liberalism in Prewar Japan*, (Berkeley, CA: University of California Press, 2006), pp. 24-25. J. Charles Schencking, *Making Waves: Politics, Propaganda, and the Emergence of the Imperial Japanese Navy, 1868–1922*, (Stanford: Stanford University Press, 2005), p. 37.

to themselves but rather as a long-term investment. The improvement of financial capabilities in the Germany and France had also been enabled by pro-democracy political reforms:

> *'During the 19th century, the Germany Empire and France reformed their state bureaucracies … founded national banks, which provided an apparatus through which the state could borrow, and constituted elected legislative bodies that controlled the state budget and in the manner of the British parliament, which improved government credit because loans to the state were secured by the measure of control over taxation and spending that was held by the elected representatives of monied interests.'*[79]

Navies became even more expensive in the age of steam. The leapfrogging development of naval technology and the resulting fast upgrading of naval hardware further increased the costliness of navy. Engels observed:

> *'… the rivalry between armour-plating and the fire power of guns is so far from being at an end that nowadays a ship is almost always not up to requirements, already out of date, before it is launched. The modern warship is not only a product, but at the same time a specimen of modern large-scale industry, a floating factory-producing mainly, to be sure, a lavish waste of money …*
>
> *… the state … has now to pay for one ship as much as a whole small fleet used to cost; …* [and] *has to resign itself to seeing these expensive vessels become obsolete, and therefore worthless, even before they slide into the water.'* [80]

In this context, it was increasingly difficult for traditional state-owned military industrial plants to build warships of the latest design at low cost. McNeill

[79] Sumida, *In Defence of Naval Supremacy*, p. 7.
[80] Friedrich Engels, *Anti-Duhring,* 1878. Reprint. (New York: International Publishers, 1970), p. 191.

observed that many state-owned arsenals with high operational costs stood idle much of the time because the nation's demands were not strong enough to keep them busy.[81] This often resulted in state-owned arsenals producing obsolete models at higher production costs.[82] This problem could only be solved by allowing greater participation of private arms manufacturers who engaged in international sales.[83] However, this was only likely to happen in democracies. Absolutist governments whose policies lacked flexibility were less capable of tackling the limits in cost-effectiveness of state-owned arms manufacturing.

***

The economy of the Qing Empire was very different from that of those of a true seapower. The Qing Empire was a continental power with a huge population of some 430 million in the 1850s, with a standing army as large as 800,000 men.[84] Soil and human labour constituted the economic foundations of the country. In contrast to the seapowers whose national strength was hinged on the wealth created through trading, agriculture was the economic pillar for Chinese empires. In the eyes of Chinese emperors, prosperous agriculture meant not only social stability, but also greatness of the nation, as prosperous agriculture could uphold a large population, and a large population could nurture a strong army. Most of the succeeding Chinese empires had attached great importance to agriculture; the Qing Empire was no exception.

This economic pattern shaped China's military and its strategy. Chinese warfare was mainly revolved around agriculture. As the historian L. Ni observed that when China was in disunity, Chinese military behaviour tended to show a higher degree of aggressiveness, because the aim of the military was to capture arable lands (e.g. the wars in the Spring and Autumn Period). When China was unified, the aggressiveness usually declined as the nation's military adopted a defensive posture partly because the capture of arable land had been completed,

81 McNeill, *The Pursuit of Power*, pp. 271-272.

82 McNeill observed that the state-owned Woolwich Royal Arsenal had invested in new machinery for producing larger and larger wrought iron guns for the British Royal Navy ever since the 1860s. But the shift to steel escalated costs so suddenly and drastically that the responsible authorities balked at installing the necessary new facilities at Woolwich. Ibid., 271.

83 Ibid., 271-272.

84 This number includes 600,000 Green Standard Army plus 200,000 Eight Banner Army.

making the safeguarding of said land becoming its top priority. The government too became preoccupied with the administration of the vast empire and the management of agricultural activities within it.[85]

In the same sense, there existed no Western-style navy in the Chinese military system, fundamentally because China's strength came from within, rather than from overseas. Instead of a navy, China had *water forces* (the name is translated literally in order to underscore the difference). They were different from Western navies in three interconnected senses: first, the *water forces* were structured differently. In conformity with Chinese military traditions, the *water forces* were subject to no centralised command. The *water forces* were organised provincially, and their disposition was highly dispersed.[86] Secondly, unlike Western navies, the *water forces* were not a sea-going force. As Lorge pointed out: '*naval needs of Chinese empires were usually limited to the rivers and canals of their own territory, not the sea coast.*'[87] Thirdly, the *water forces* main tasks consisted in patrolling rivers and territorial waters against smuggling and piracy, since '*Chinese empire was never really mercantilistic'* and *'there was no single case in which the Chinese Imperial Navy captured and off-shore market*.' [88] Consequently, '*there was no need for the development of the man-of-war in China since capturing an existing off-shore market was never on the Chinese agenda*.'[89]

More specifically, the Qing Empire's economy was a self-sufficient natural economy. At the national level, provinces were the largest economic units; at the most basic level, the economy was composed of numerous self-supporting cells of peasant households. The situation was very similar to the French economy depicted by Marx in *the Eighteenth Brumaire of Louis Bonaparte*:

> '*… an enormous mass whose members live in similar conditions but without entering into manifold relations with each other … their field of*

[85] Lexiong Ni, *文明的转型与中国海权: 从陆权走向海权的历史必然 Wenming de zhuanxing yu Zhongguo haiquan: Cong lunquan zouxiang haiquan de lishi biran [Civilisationa Transformation and China's Sea Power: The Historical Inevitability of Moving from Land Power to Sea Power],* (Beijing: Xinhua Press, 2010), p. 173.
[86] Mao, *The Collapse of the Heavenly Kingdom,* p. 50.
[87] Peter Lorge, 'Water Forces and Naval Operations' in A Military History of China. Updated Edition, David Graff and Robin Higham eds., (Lexington: University Press of Kentucky, 2012), p. 82.
[88] Gang Deng, *Maritime Sector, Institutions, and Sea Power of Premodern China*. (Westport, CT: Greenwook Press, 1999), p. 207.
[89] Ibid., 212.

production, the small holding, permits no division of labor in its cultivation, no application of science, and therefore no multifariousness of development, no diversity of talent, no wealth of social relationships … a small holding, the peasant and his family; beside it another small holding, another peasant and another family. A few score of these constitute a village, and a few score villages constitute a department. Thus the great mass of … nation is formed by the simple addition of homologous magnitudes, much as potatoes in a sack form a sack of potatoes.' [90]

This form of economy determined that the Qing Chinese society had only limited need for trade. Fundamentally because there was low social division of labour and the productivity of each basic unit of economy was equally low. Consequently, such an economy had an adverse impact on the development of science and technology as well as industrialisation in China.

Mercantilism was considered as a threat to the agrarian economy; steps were taken to inhibit commerce for the sake of agriculture.[91] A tradition called 'exalting agriculture and disparaging commerce' was cultivated in Chinese society.[92] Merchants and mercantile capitals were put under strict control. The authorities were vigilant of undue concentration of too much wealth as much as they were vigilant of undue concentration of too many troops under one military commander. Merchants were encouraged to convert themselves into land owners rather than re-invest and expand. As McNeill observed:

'*Chinese merchants and manufacturers themselves subscribed to the value system that limited their roles in society to comparatively modest proportions. They proved this by investing in land and in education for their sons, who thus join the dominant landowning class and could*

[90] Karl Marx, 'The Eighteenth Brumaire of Louis Napoleon' in *Selected Works*, Vol. 1. Karl Marx., (Moscow: Foreign Languages Publishing House, 1962), p. 334.
[91] Daqing Wang, '1980 年以来中国古代重农抑商问题研究综述 1980 Nian Yilai Zhongguo Gudai Zhongnongyishang Wenti Yanjiu Zongshu [A Review of Researches concerning Ancient Chinese Policy of Encouraging Agriculture and Restraining Commerce Since 1980]', *Trends of Recent Researches on the History of China*, No. 3. (Mar., 2000), pp. 12.
[92] '重农抑商'

compete for a place in the ranks of officialdom.' [93]

In most of the Chinese empires since antiquity, manufacturing and commerce were considered less important and as society's 'minor undertakings' (*mo ye*) as opposed to the 'fundamental undertaking' (*ben ye*) of agriculture.[94] Chinese economic policies tended to favour the latter rather than the former. The emperor, who was supposed to epitomise Chinese values, opined in response to the McCartney Mission's display of the cream of British modern industry: *'I set no value on objects strange or ingenious, and have no use for your country's manufactures.'*[95]

In the same sense, science and technology received very little attention in the Qing Empire. The four constituent functional groups of the Chinese society were, in precedency order, scholars, peasants, artisans, and tradesmen. Artisans, the social group that had the strongest potential in promoting science and technology, were considered to be lower than peasants and only higher than tradesmen. The governmental repression of the artisans, merchants and mercantile capitals hindered the development of science and technology, and impeded the development of industrialisation. As one of the answers to the Needham Question disclosed, totalitarianism, which was usually symbiotic to agrarian economy, should take most of the blame of China's backwardness in science.[96] Consequently, the Chinese society lacked a solid commercial and

---

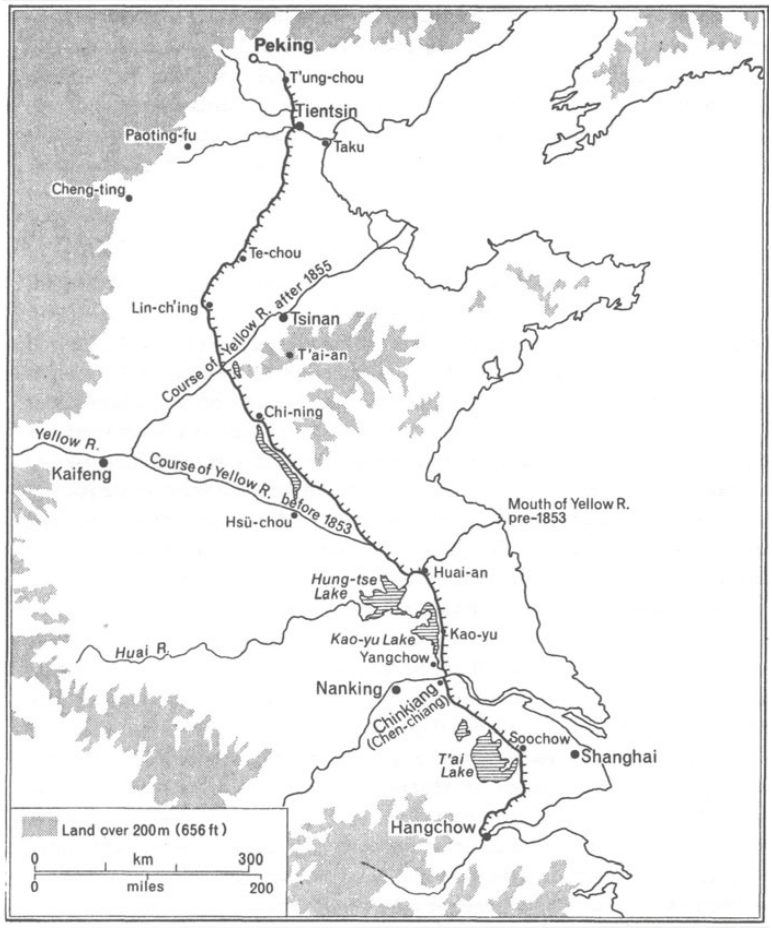
[93] McNeill, *The Pursuit of Power*, p. 48.

[94] Minor undertaking is known as 末业 (*mo ye*) in Chinese, whereas agriculture is known as 本业 (*ben ye*).

[95] Qianlong, Letter to George III (1792), University of California, Santa Barbara. Retrieved January 25, 2015; Between mid-18th century and the First Opium War (1839-1842) most of Chinese international trade was carried out via the Hong merchants in Guangzhou. A key reason for China's confining international trade to Guangzhou was that the Imperial Court feared that the free movement of foreign ships would contribute to the collusion between foreigners and traitorous natives. Hsü, *The Rise of Modern China*, p. 141. Yet, being a member of the Hong merchants was normally regarded as a burden rather than a privilege. Peer Vries, *State, Economy and the Great Divergence: Great Britain and China, 1680s-1850s*, (London: Bloomsbury Academics, 2015), p. 357. The Hong merchants, in the words of Wakeman Jr., played an '*unwilling role … as security merchants*.' Frederic Wakeman, *Strangers at the Gate: Social Disorder in South China, 1839-1861*, (Berkeley, CA: University of California Press, 1966), p. 44.

[96] The Needham Question is known as: why did modern science, the mathematisation of hypotheses about Nature, with all its implications for advanced technology, take its meteoric rise only in the West at the time of Galileo [but] had not developed in Chinese civilisation (or Indian or Islamic)? Joseph Needham, *The Grand Titration: Science and Society in East and West*, (London: George Allen & Unwin, 1969), p. 16. Karl Wittfogel used 'Oriental Despotism', while Joseph Needham used 'Bureaucratic Feudalism' to describe the structural obstacle of Chinese development of science during imperial times. See Karl A. Wittfogel, *Oriental Despotism: A Comparative Study of Total Power*, (New Haven and London: Yale University Press, 1957) and Needham,

industrial basis for the development of naval power.



Map 2.2 A map of the Grand Canal.[97] Totalling nearly 1,800 km, the Grand Canal was the world's longest artificial canal. It started from Hangzhou in the south and ended in Beijing in the north. It also linked three major navigable rivers: the Yangtze River, the Huai River and the Yellow River. The canal was mainly used for shipping grains from the south to the north. In its height, more than 8,000 boats transport around 300,000 tons of grain through the Grand Canal yearly.

The Grand Titration, pp. 190-217. For more recent critiques against these lines of interpretation, see Roger Hart, 'Beyond Science and Civilization: A Post-Needham Critique', *East Asian Science, Technology, and Medicine*, No. 16, (1999), pp. 88-114; and Benjamin A. Elman, 'The Failures of Contemporary Chinese Intellectual History', *Eighteenth-Century Studies*, Vol. 43, No. 3, (Spring 2010), pp. 371-391.

[97] Susan M. Jones and Philip A. Kuhn, 'Dynastic Decline and the Roots of Rebellion' in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Ed. John K. Fairbank, (Cambridge: Cambridge University Press, 1978), p. 120.

The Qing government also discouraged seagoing activities, as they were difficult to oversee. The North China Plain and the Yangtze Plain, due to its fertile land and good irrigation, were the centres of agriculture production.[98] It seemed to be a necessity to develop a degree of maritime transportation, as the agricultural centre was concentrated in places not far from the sea and navigable rivers, and was distant from the places where the grain was needed. But the successive Chinese empires, never lacked the capability to mobilise large amounts of manpower, solved the problem of transportation by building an artificial canal – the Grand Canal (see Map 2.2), which the Qing Dynasty continued to use. It further developed well-designed supervision system to oversee transportation along the Grand Canal and appointed senior imperial officials to be in charge of its management. Maritime transportation was not encouraged.

Another reason why the Qing Empire discouraged seagoing activities was that in the early and mid-Qing Dynasty, the sea was a major source of security threats. Taiwan Island and a number of other islands in its vicinity remained under the control of the residual forces of the Ming Dynasty until the late 17th century. These island forces harassed the southeast coastal areas from time to time. In addition to this, pirates operated along the southern Chinese seaboard throughout the Qing Dynasty.[99] Instead of strengthening the *water forces* to eradicate the threats, the continental-minded Qing authorities tightened the control of the inhabitants of seaboard areas in order to cut the enemy off from supply of food and other materials.[100] In commenting upon a report sent by a

---

98 Quansheng Ge et al. '过去 300 年中国部分省区耕地资源数量变化及驱动因素分析 Guoqu 300 Nian Zhongguo Bufen Shengqu Gengdi Shuliang Bianhua Ji Qudong Yinsu Fenxi [Changes of Cultivated Land Quantity and Driving Forces Analysis of Some Provinces of China in Past 300 Years]', *Progress in Natural Science*, Vol. 13, No. 8. (2003), pp. 825-832.

99 Yuxiang Chen, '清代中叶广东海盗之研究 (1810-1885) Qingdai Zhongye Guangdong Haidao zhi Yanjiu [The Study of Chinese Pirates along the Coast of Guangdong Province during the Qing Dynasty, 1810-1885]', *Cheng Kung Journal of Historical Studies*, No. 34. (Jun., 2008), pp. 94-95. Yajuan Zhang, '近十五年来清代乾嘉年间海盗问题的研究 Jin Shiwunian Lai Qingdai Qianjia Nianjian Haidao Wenti de Yanjiu [Researches in the Last Fifteen Years concerning Maritime Piracy in Qian Long-Jia Jing Regimes of Qing Dynasty]', *Trends of Recent Researches on the History of China*, No. 3. (Mar-Apr., 2012), pp.42-49.

100 Prior to the Self-Strengthening Movement, only in rare cases the Qing government tried to tackle seaborne threats by means of naval counterattack. The Qing Government in 1662 ordered coastal inhabitants from Shandong province in the north to Guangdong province in the south to move inland to negate the coast as a battleground and to cut off the supply lines of Zheng Chenggong – a Ming Dynasty loyalist who used his navy to harass the mainland's coast. The Qing Empire developed a degree of naval force to launch a counterattack in the mid-17th century, but the navy no longer remained on a war footing

local official about pirates, the Kangxi Emperor said: '*there is no den for pirates in the ocean. They are in fact land-based gangsters … local officials should watch closely the land* [rather than the sea].'[101] Notably among the steps taken to address maritime threats by land were the *sea ban* – decree that prohibited seagoing, and the relocation of coastal inhabitants.[102] To which Fairbank observed:

> *'… instead of controlling the sea, the Ming and Ch'ing* [Qing] *both applied to maritime enemies the concept developed against invaders by land …* [the concept was] *applied to the japan-based pirates of the Sixteenth Century and the anti-Manchu sea rebels under Cheng Ch'eng-kung* [Koxinga] *in the Seventeenth Century, this called for withdrawing the Chinese population and resources from the whole seacoast, at the cost of great suffering, and shutting off maritime trade…'* [103]

Consequent to the abovementioned reasons, the Chinese state-sponsored seafaring activities was very weak, and when China had to develop a navy in the late nineteenth century, there was very little that Chinese society could offer in support a steam navy.

As to finance, unlike European seapowers whose rise benefited greatly from the combination between maritime exploration, trade, and overseas colonies, the Chinese empire dismissed commerce as a means to create national wealth. Instead, the bulk of the governmental revenue of the Qing Dynasty came from land taxes.[104] Due to the slow increase in cultivated land, the national wealth accumulated only at a moderate pace. The expenditures, consisting mainly of military expenses and officials' salaries, remained steady, if not increased due to

---

after the Ming Dynasty loyalists were annihilated. Benjamin A. Elman, 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895'. *Modern Asian Studies*, Vol. 38, No. 2 (2004), pp. 283-326.

101 GZD-KX, Vol. 34, p. 1.

102 Hongbin Wang, *清代前期海防：思想与制度[Coastal Defence in the Early Qing Dynasty: Theory and System]*, (Beijing: Social Sciences Academic Press, 2002), pp 60-61. Yishan Xiao, *清代通史 qingdai tongshi [A General History of the Qing Period]*, Revised Edition, (Taibei: The Commercial Press, Ltd., 1962), pp. 370-372.

103 J. Fairbank, 'Introduction: Varieties of the Chinese Military Experience' in *Chinese Ways in Warfare,* F. A. Kierman and J. K. Fairbank eds., (Cambridge, MA: Harvard University Press, 1974), pp. 25-26.

104 Hsü, *The Rise of Modern China*, p. 59.

war and natural disasters. According to the calculation of Y. Xiao, during the reign of the Qianlong Emperor, the heyday of the Qing Empire, the annual revenue was around forty-three to forty-four million *taels* and the surplus was around eight to nine million *taels*.[105]

Years	1836-45	1846-55	1856-65	1866-75	1876-85	1986-95	1896-1911
Number of Incidents	246	933	2,332	909	385	314	653

Table 2.1 Frequencies of domestic insurrections from 1836 to 1911.[106] It can be seen in this table that the frequency of domestic revolts was high in the mid-19th century. These revolts, together with the two Opium Wars, had exhausted the imperial coffers of the empire and induced the emergence of local militia forces, from which many of the Self-Strengtheners emerged.

In such economic context, the growth of national wealth depended on good harvest and the absence of war and natural disasters. The imperial coffers had managed to accumulate a saving of around 70 million *taels* over a stable period spanning the reign of the Kangxi, Yongzheng and Qianlong emperors.[107] However, the savings accumulated in that period were soon used up in the first half of the 19th century. The rampant anti-Manchu secret societies and rebellions such as the White Lotus, Taiping and Nien Rebellions dealt a heavy blow on Chinese economy not only because they resulted in huge military expenditure but they also severely disrupted agricultural production – the empire's main source of income (see Figure 2.4).[108] The two major foreign wars, the First and the Second Opium War in the mid-19th century had also contributed greatly in exhausting the savings made in the heyday of the Qing Empire.[109] The finances

[105] Hsü, *The Rise of Modern China*, p. 61, p. 63., Xiao, *A General History of the Qing Period*, pp. 432-435, See also Yuping Ni, *清朝嘉道财政与社会 Qingchao jia-dao caizheng yu shehui [Finance and Society in the Qing Dynasty, Jiaqing and Daoguang Periods]*, (Beijing: The Commercial Press, 2013), pp. 52-53,

[106] Marianne Bastid-Bruguiere, 'Current of Social Change'in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 594.

[107] Hsü, *The Rise of Modern China*, p. 126.

[108] Kang Chao, *Man and Land in Chinese History: An Economic Analysis*, (Stanford: Stanford University Press, 1986), p. 31.

[109] Mao pointed out that the Opium War cost the Qing government about 250 million *taels*, see Mao, *The*

of the Qing Empire were on the brink of bankruptcy by the 1860s when the Self-Strengthening Movement started.

By the beginning of the Self-Strengthening Movement, the empire was suffering from a severe shortage of capital. Gerschenkron's research shows that in the first spurt of industrialisation of the 'backward' European countries like Russia and Germany, state budgets and industrial banks played a crucial role in offsetting the limited market demand and capital supply.[110] The Qing Empire, however, refused to establish such financial infrastructure to mobilise social capital. Feuerwerker explained:

> '*The failure of the Ch'ing* [Qing] *government to promote a modern banking system which could foster industrial investment ultimately stemmed from the same causes which made it unable to invest in economic development from its own budget. In brief, the fiscal system of the central government like other aspects of its administration was quite superficial. Even in normal times the imperial bureaucracy … did not penetrate very deeply into Chinese society, including those aspects of society which constituted the economy. The central government normally confined its economic role to claiming its share of a relatively fixed economic product and to providing the internal order and external defences which would permit that product to be reproduced from one year to the next. This was of course in accordance with the main stream of the Confucian political ideology.* … [it was not that there were no means to depart from economic passivity] … *Such departures, however, were perhaps particularly difficult for the ultra-conservative Manchu dynasty, always conscious of its foreign origin and determined to demonstrate its mandate by upholding Confucian orthodoxy.*'[111]

The ruling Manchus were reluctant to establish a modern financial infrastructure in order to nurture its modern defence industry because it was

---

Collapse of the Heavenly Kingdom, p. 421 and p. 465.

[110] Albert Feuerwerker, 'Economic Trends in the Late Ch'ing Empire, 1870-1911' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 59.

[111] Ibid., 59-60.

against Confucian ideology, which they had to observe to justify their legitimacy to rule. Instead, a considerable part of the money that China used to support the Self-Strengthening efforts came from the Imperial Maritime Customs Service, an institution established as a consequence of the Second Opium War. The Imperial Maritime Customs Services opened up new source of income for the empire. The customs revenue became the major source of 'disposable income' for many projects of the Self-Strengthening Movement:

> '*In the late 1870s, the total revenue of the empire, central and provincial, that came to the cognizance of Peking was about 60 million taels. While the largest portion still came from the land tax, likin accounted for 18 million (or 30 per cent) and maritime customs revenue, 12 million taels (or 20 per cent). Since the older sources of revenue and even the likin had by the early 1860s been earmarked almost entirely for established and inflexible expenditures, the customs revenue was invaluable for any new undertakings of the government, as well as its emergency needs. Maritime customs funds furnished part or all of the revenues of such new under-takings as the Peking T'ung-wen Kuan, the Peking Field Force, the Kiangnan and the Tientsin Arsenals, the Foochow* [Fuzhou] *Navy Yard, the educational mission to the United States, the legations abroad and the new naval programmes after 1875.*' [112]

However, the customs revenue was not a reliable source of funds for the Chinese steam navy. This was because the allocation of the customs revenue was not statutory. It was controlled by Beijing, and requests for the use of the funds had to be sanctioned by the emperor. In the eyes of the emperor, however, the role that the navy could play was little more than defending the coast, which was not of higher importance than other undertakings. For example, the military campaigns in northwestern China in the 1870s and 1880s were enabled by loans secured from British banks, which was guaranteed by and eventually paid for from the customs revenue.[113]

---

[112] Kuo and Liu, 'Self-Strengthening', p. 513. The *likin* was an inter-provincial transit tariff.
[113] Ibid., 515.

As to the industrial plants, the Qing Empire did establish a number in order to manufacture western weapons ranging from small firearms to steam warships.[114] But totalitarian government control, lack of funds and underdeveloped industrial capabilities impeded the development of an indigenous Chinese military industry. In the realm of firearms manufacturing, the total government control over military industrial plants made them bureaucratic bodies with the functions of firearms production, rather than plants operating on a commercial basis. Consequently, the cost-effectiveness in such plants was low. For example, products of the Jiangnan Arsenal always tended to be more expensive and less advanced than their Western counterparts. The production of muzzle loading carbines in the Jiangnan Arsenal went on until 1875.[115] The reason for the extended production was that the manufacture of new breech-loader rifles would require upgrading of the machines, which could not be achieved without large amount of investment. Similarly, the manufacture of Remington rolling block rifles in the Jiangnan Arsenal continued until 1890, by which time it had already been considered as obsolete in the West.[116] Moreover, the Kiangnan Arsenal-made Remington rifles were not only more costly, but also inferior in terms of quality and many Chinese army units refused to use them.[117] This form of totalitarian economy had stronger and even more consequential impacts on the shipbuilding industries of the Qing Empire, which will be discussed in detail in later chapters.

In a bold move to solve the problem of a lack of funds, private capital was allowed to be invested in some non-military industrial endeavours within a framework known as 'government supervision, merchant management' (or 'government-sponsored merchant undertakings' according to Hsü).[118] The most notable examples were the China's Merchants' Steam Navigation Company, the Kaiping Coal Mine, and the Imperial Telegraphy Administration.[119] Capital for

---

114 For an overview of the Chinese military industries established in late Qing Dynasty see Erh-min Wang, *清季兵工业的兴起 Qingji bing gongye de xingqi [Rise of the armaments industry in the late Qing period],* (Taibei: Institute of Modern History, Academia Sinica, 1972).

115 JNZZJJ. Vol.7, p. 17.

116 JNZZJJ. Vol.7, p.18.

117 Kuo and Liu, 'Self-Strengthening', p. 521.

118 Known as '官督商办' in Chinese.

119 Albert Feuerwerker, *China's Early Industrialization: Sheng Hsuan-huai (1844–1916) and Mandarin Enterprise,* (Cambridge, MA: Harvard University Press, 1958), pp. 9-10. Hsü, *The Rise of Modern China*, p. 284.

such enterprises came mainly from private sources, but private investors were not allowed to take part in the administration, which remained in the hands of government appointed officials. The authorities welcomed private capitals but resented private control. It was stipulated as a rule for such enterprises that: '*profits and loss are entirely the responsibility of the merchants and do not involve the government* [while the management of the such enterprises is in the hands of bureaucrats]'.[120] Hsü observed that '*these government-supervised merchant enterprises were a hybrid operation which smacked of strong official overtones and the usual bureaucratic inefficiency, corruption, and nepotism.*'[121] Such enterprises were not successful. Zheng Guanying, former manager of the China's Merchants' Steam Navigation Company complained: '*it was not that the merchants do not want* [to invest in the Merchants' Steam Navigation Company], [it was because] *they are concerned about the authority of the bureaucrats, and their lack of trustworthiness*'.[122]

2.3 The Ideological Dimension

In this dimension we are going to look at the relations between a nation's ideology and the society's willingness to support its navy. A sea-loving social ethos serves as a powerful catalyst in facilitating the development of naval power. In a society that favoured seafaring, it was easier for the navy to obtain resources that it needed. Conversely, in a society that ignored the sea, it was usually harder for the navy to gain access to them. However, one should not take a sea-loving social ethos for granted. Historically, many societies had a rather adverse image of the sea.[123] On the contrary, a sea-loving social ethos was a product of nurture rather than nature.

Sea-loving social ethos was usually associated with a particular form of socio-economic ideology – mercantilism.[124] The idea of mercantilism stressed

120 Kwang-Ching Liu, 'British-Chinese Steamship Rivalry in China, 1873-85'. in *The Economic Development of China and Japan,* C.D. Cowan ed., (London: George Allen & Unwin Ltd., 1964), p. 53.
121 Hsü, *The Rise of Modern China*, pp. 284-285.
122 ZGYJ, p. 1154.
123 Till, *Seapower,* p. 87.
124 Till, *Seapower,* p. 36.

the link between national strength and the wealth created through trade. Seaborne trade was a preferable means to this end. Mahan, a promoter of seaborne trade, echoed this view by claiming that '*if sea power be really based upon a peaceful and extensive commerce, aptitude for commercial pursuit must be a distinguishing feature of the nations that have at one time or another been great upon the sea. History almost without exception affirms that this is true.*'[125] A sea-loving social ethos was, to a great extent, symbiotic to the pursuit of commercial interests.

People were the vehicle of such a social ethos; the more people benefit from seaborne trade, the stronger society's sea-loving social ethos tended to be. The key to the successful nurturing of a sea-loving social ethos, therefore, was to create a social system in which people's interests were hinged on the success of seaborne trade. Many writers on seapower found that there was a 'maritime community' at the centre of the nations that wielded strong influence at sea.[126] Such community contained a wide range of professions relevant to maritime activities. These included merchants and manufacturers who engaged directly in commercial activities, shipbuilders and merchant marines who built the ships and ran the shipping, financiers and investors who provide maritime activities with funds, and politicians lobbying for policies that fostered seaborne trade, among others.

Once strong enough, the 'maritime community' would be able to sway policy-making. It would, as Till summarised, (a) encourage an awareness of the importance of maritime trade in society and government, helping thereby to produce the conditions in which that trade will flourish; (b) elevate the merchant class socially and politically, encouraging thereby the development of a value system and a style of government that fosters trade; (c) facilitate the development of naval power partly because it is simply more efficient at raising the resources navies needed and partly because the merchant classes naturally saw navies as a means of protecting maritime trade, both directly and indirectly; (d) provide direct support for the navy in that most essential of its needs –

125 Mahan, *The Influence of Sea Power Upon History*, p. 50.
126 Till, *Seapower,* p. 84.

people.[127] It can be distilled from this summary that such a 'maritime community' was able to not only assert itself in the society, but also contribute to the development of naval strength.

A strong 'maritime community' stemmed from prosperous seaborne trade was a powerful generator of supports for navy. Studying the British Royal Navy, Lincoln pointed out that the prevalent mercantilist ideology assumed that a relationship existed between international trade and the naval power.[128] Mahan echoed this view by claiming that the necessity of a navy sprang from the existence of peaceful shipping and disappeared with it.[129] Indeed, the growth of Britain's economic power paralleled the growth of its naval strength; other nations which economy had a strong element of seaborne trade such as Holland, France and Spain were largely the same. Because for seaborne trading nations, a navy that could protect one's own shipping and attack that of others was a key variable in the equation of business success and thereby national strength.

Consequently, such societies attached great importance to their navies.[130] Politicians emphasised the navy's significance in the national interest; businessmen extolled the navy as their protectors; artists and writers painted naval officers as national heroes. The navy was not only needed, but also celebrated in seaborne trading nations, carving a place for it in the national ethos. Under such circumstances, it would be much easier for navies to secure human, material, and financial resources it needed to be strong. Taking the British Royal Navy for example, a statistic showed that by 1897, 2.5 per cent of the entire male work force of Britain was employed by navy or by prime naval contractors. According to estimates from 1913, as much as one-sixth of Britain's work force were dependent on naval contracts.[131] The slogan of '*we want eight and we won't wait!*' coined by the British public, demanding the building of more *Dreadnought* battleships in the early 20th century was another strong evidence of the social awareness of the importance of the navy to the British Empire – a typical

---

127 Till, *Seapower*, pp. 84-85.
128 Margarette Lincoln, *Representing the Royal Navy: British Sea Power, 1750-1815,* (Aldershot: Ashgate Publishing Company, 2002), p. 5.
129 Till, *Seapower,* p. 100.
130 Government propaganda also played an essential role in nurturing such social ethos. See Jan Rüger, *The Great Naval Game: Britain and Germany in the Age of Empire,* (Cambridge: Cambridge University Press, 2007).
131 McNeill, *The Pursuit of Power*, p. 285.

seapower.[132]

As naval officers were revered and enjoyed high social status in maritime nations, the navy became a more attractive career to potential officers. Service as a commissioned officer in the Royal Navy was one of the few professions in which a man without an independent income could maintain himself as a gentleman, apparently working for the public good rather than for private gain.[133] Rodger observed that in the 18th century, receiving a commission for lieutenancy made one '*an officer and gentlemen overnight*'.[134] At the turn of the 19th century, a growing number of 'service elites' amongst naval officers (rather than those of noble origins) received peerages.[135] By the last few decades of the 19th century, becoming a naval officer had become a 'fashionable profession' in not only Britain, but also in many other naval powers, which had attracted many sons of the upper classes.[136] This, in turn, further consolidated the status of navy in the sea-loving societies and made it even easier for the navy to get the resources it needed to flourish.

Also, the relations between the navy and the society were not one-directional. Powerful warships, such as HMS *Victory* of the British navy and the Japanese Battleship *Yamato*, often embodied national spirit. The Royal Navy inspired the British society and had become an important element in the nation's identity, because it was in conformity with the value of British society and played an exemplary role in it. J. Rüger observed that the Royal Navy was regarded as: '*one of the most important metaphors of Britishness in the 19th century*'.[137] It was the cream of industrialisation, the defender of liberty, the nation's symbol and a role model of the society:

> *'The Royal Navy's character has always been reflected in social life of the nation, which in 1870 could look back with pride on a wealth of achievement. The Industrial Revolution had reached its apogee and*

[132] Geoffrey Wawro, *Warfare and Society in Europe, 1792- 1914*, (London: Routledge, 2000), p. 183, and the Chapter 'Sea Power and Popular Navalism, 1890-1914', pp. 160-187.
[133] Lincoln, *Representing the Royal Navy*, pp. 3-4.
[134] Roger, *The Command of the Ocean*, p. 387.
[135] Ibid., 513.
[136] Richard Hill, *War At Sea In The Ironclad Age*, (London: Cassell & Co., 2002), pp. 75-78.
[137] Jan Rüger, *The Great Naval Game: Britain and Germany in the Age of Empire.* p. 3.

Britain was the foremost trading nation in the world. Gradually the basis of English life was changing, the focus of employment shifting from agriculture to industry and from the country to the towns. A different society emerged, eager to learn about machinery, how to produce energy and how to expand national resources. Benefits of industrialism were felt in everyday life…' [138]

***

The Chinese society had a very different social ethos in comparison with the seapowers. Confucianism had been the dominant ideology of the consecutive Chinese Empires since the Han Dynasty (220-202 BC), yet the Manchu rulers of the Qing Empire embraced Confucianism even more tightly than most of their Han Chinese predecessors.[139] As an ethnical-socio-political teaching, this ideology provided a set of principles that helped to reinforce the absolutist monarchy and the feudal-agrarian social order. For instance, Confucianism principles advocated the Three Bonds and the Five Relations (*san gang wu chang*), which normalised the relations between the ruler and the subjects, father and son, and husband and wife. With respect to economy, Confucianism stressed the fundamental importance of agriculture and belittled the pursuit of commercial interests. The Confucian ideology harmonised the people's behaviour and mind with the politico-economical realities of the Chinese empire.

---

[138] John Wells, *The Royal Navy: An Illustrated Social History, 1870-1982*, (Stroud: Sutton Publishing Ltd, 1999), p. 2.

[139] The Manchus, an ethnic group originating from outside the homeland of Confucianism were considered as less 'Chinese' in cultural terms prior to the Qing Dynasty, causing the Han Chinese to question their legitimacy to rule. At the same time, the traditional Chinese worldview stressed cultural rather than ethnic identity, which meant whether or not one should be regarded as Chinese depended on whether or not one could observe Chinese traditions. As the Yongzheng Emperor pointed out: '[a] Chinese [he who] identifies himself with barbarian way of life should be regarded as a barbarian; [a] barbarian [he who] identifies himself with Chinese way of life should be regarded as a Chinese.' ('中国而夷狄也，则夷狄之；夷狄而中国也，则中国之') This meant that in the Chinese cultural context, the Manchus retained their legitimacy as long as they successfully adhere to the Han Chinese – mostly Confucian – traditions. The Manchus, in spite their little connections with Confucianism before they rose to power, tended to stick even more closely to Confucian principles than the Han Chinese. Openly breaking with Confucian traditions would have undermined their mandate to rule. Therefore, they did not have the option open to the Meiji reformers in Japan to legitimise any sweeping reform programme in the late 19th century. S. C. M. Paine, *The Sino-Japanese War of 1894-1895: Perceptions, Power, and Primacy*, (Cambridge: Cambridge University Press, 2003), p. 358. Elliott, *The Manchu Way*, p.357.

It played a substantial role in shaping the Chinese society, which was very different from that of the West. Fairbank observed:

> '*In this ancien régime the classical learning tolerated only change-within-tradition, the extended family system dominated the individual, a doctrine of duty eclipsed any doctrine of rights, civil administrators controlled the military and used the merchants, and the principles of moral conduct took precedence over human passions, material profit, and the letter of the law. Truly, the two civilizations* [the Chinese civilization and that of the Western world] *stood embattled.*' [140]

Instead of pursuing trade as a means to create national wealth, the Qing authorities discouraged and disdained it. The Chinese society had Confucianism as its official ideology.[141] Wright pointed out that a Confucian society was of necessity an agrarian society: trade, industry, economic developments in any form were its enemies.[142] Historically, China's economy relied on agriculture, and agrarian economy was comparatively more stable than trade. Lacking the scale of fiscal difficulties encountered in Europe in the early modern era, Chinese officials had less reason to imagine new forms of finance. Not only did they depend little on mercantile wealth to support the state, they also feared the potentially disruptive consequences of both concentrated wealth and the pursuit of such wealth.[143] The economic prosperity of the Chinese empire consisted in a successful management of agrarian production within China rather than commerce. To Lord McCartney's proposal for trade, the emperor, who was supposed to set moral example for the Chinese people, replied: '*our Celestial Empire possesses all things in prolific abundance and lacks no product within its borders. There is therefore no need to import the manufactures of outside*

---

[140] J. Fairbank, 'Introduction: the Old Order', in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Ed. John K. Fairbank, (Cambridge: Cambridge University Press, 1978), p. 2.

[141] It should be pointed out that there are different schools of Confucianism and the interpretation of Confucian classics also changed in the course of time. The Confucianism that we are referring to in this study is the version of that prevailed in the Qing Dynasty.

[142] Mary C. Wright, *The Last Stand of Chinese Conservatism: The T'ung-chih Restoration, 1862-1874*, (Stanford: Stanford University Press, 1957), p. 3.

[143] Roy Bin Wong, *China Transformed: Historical Change and the Limits of European Experience,* (Ithaca, NY.: Cornell University Press, 1997), p. 146.

barbarians in exchange for our own produce.'[144]

As to the social status of the sea-going people in the Qing Dynasty China, John Barrow, a member of the McCartney Mission observed:

> '*Here* [in China] *merchants, tradesmen and mechanics, are considered far beneath the husbandman. So far from obtaining the honours attendant on commerce in the ancient city of Tyre, "whose merchants were princes, whose traffickers were the honourable of the earth," or the ancient immunities granted in Alfred's reign by which an English merchant, who had made three foreign voyages by sea, was raised to the rank of nobility, the man who, in China, engages in foreign trade, is considered as little better than a vagabond.*'[145]

The 1740 anti-Chinese Batavia Massacre in the Dutch East Indies illustrates this point. When the Dutch colonial government of the Dutch Indies apologised to the Qing Imperial Court for the deaths of tens of thousands of the Chinese diaspora and the raiding and burning of six to seven hundred Chinese-owned houses, the Qing emperor replied: '*the Celestial Empire does not recognise* [the Chinese diaspora killed in the massacre] *as Chinese nationals, they who leave their ancestors' tombs behind to make* [commercial] *profits overseas are outcasts of the empire, and no longer have anything to do with the Imperial Court, no matter what happens to them.*'[146] In the Qing Dynasty, strict restrictions were put on the scale of maritime commercial activities and the size of ships built for this purposes in order to discourage it.[147] Therefore, in spite of the long seaboard and the large population, the sea received little attention in Chinese national life; the number of people, to borrow Mahan's words, 'following the sea' was small.

Instead of extolling a maritime community, the Qing Empire installed

---

144 Qianlong, Letter to George III (1792), University of California, Santa Barbara. Retrieved January 25, 2015

145 John Barrow, *Travels in China*, (London: T. Cadell and W. Davies, 1804), p. 399.

146 Peer Vries, *State, Economy and the Great Divergence: Great Britain and China, 1680s-1850s*, (London: Bloomsbury Academics, 2015), p. 359.

147 For the Qing government's restrictions against Chinese seaborne commercial activities, see Wang, *Coastal Defence in the Early Qing Dynasty*, pp. 21-48; for the restrictions on building civilian ships, see pp. 108-160.

Confucian-scholars as its elites. The tool that the Qing government used to promote Confucianism among Chinese elites was the system Imperial Examinations (*keju*),[148] which was meritocratic system for official selection. Potential officials were selected according to their performance in the examinations, in which most of the questions required candidates to paraphrase and explain certain phrases extracted from the Confucian classics.[149] This system was welcomed by the Chinese people because, as Hsü commented, '*it made the society more egalitarian by permitting nearly all its members to rise to the top through individual merit rather than birth or wealth. It encouraged social flexibility and tended to blur class distinctions*.'[150] The government also saw in the examinations the following practical values: (a) it produced officials of intelligence who were thoroughly indoctrinated in the Confucian ethics; (b) it kept the attention of the gentry fixed on orthodoxy and provided an orthodox outlet for talent and ambition; and (c) it won the support of the people by providing them with officials whose power and behaviour were based on universally accepted canons.[151]

Confucian scholars were regarded as elites of the Chinese society. The Qing authorities bestowed upon them a number of prerogatives to honour them and to make them respected by the commoners.[152] To begin with, the Confucian scholars who had secured a degree in the examinations would immediately become a member of the gentry. The gentry were the elite social group around which the whole Chinese society revolved.[153] Being a member of the gentry meant many unique privileges. For example, the gentry were distinguished from the commoners in style of dress and in embellishments. This class was protected against insults from commoners and interference of officials. They were also exempted from corveé labour service, as their status and cultural refinement forbade them to engage in manual labour.[154] They played a central role in the Chinese society, yet they were the most devoted guardians of the Confucian

148 Hsü, *The Rise of Modern China*, pp. 75-80.
149 Chuzo Ichiko, 'Political and Institutional Reform, 1901-11' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 376.
150 Hsü, *The Rise of Modern China*, p. 79.
151 Wright, *The Last Stand of Chinese Conservatism*, p. 79.
152 Hsü, *The Rise of Modern China*, pp. 72-73.
153 Ibid., 6.
154 Ibid., 72.

order.[155] It was not without good reason that the Qing Empire as sometime referred to as a 'gentry state'.

More importantly, the Confucian scholars were the reserve echelon of officials: an overwhelming majority of the officials of the Qing Dynasty were selected from the scholars who had secured a degree in the examinations. This practise had had a threefold consequence on the Chinese intellectuals and officialdom. First, since taking the Imperial Examinations was the primary path to upward mobility in the Qing Empire, an attitude came to prevail in the society known as '*all activities are unworthy, only learning* [Confucian classics] *is lofty*'.[156] Intellectuals'. Attention was tied to the Imperial Examinations and Confucian classics. Second, since officials were selected among the scholars who had the best understanding Confucian classics, the entire bureaucracy of the empire was subscribed to the Confucian dogmas. Third, an intellectual climate that featured strong inertia of deeply rooted institutions was formed in Chinese society. Kuo and Liu observed: '*the examination system … not only* [was] *upheld by vast vested interests but had gained sanctity because of tradition.*' [157]

The Imperial Examinations had, to a considerable extent, possessed and shaped the Chinese elite class. The examinations and the ideology it upheld had some characteristics that produced consequential negative effects on the Self-Strengthening Movement.

Firstly, the examinations fell prey to formalism and became increasingly impractical. In the Qing Dynasty the Confucian classics were given official annotations and were provided as the only accepted version for the examinations. The candidates strived to learn the entire text of the classics as well as the official annotations by rote memory, and the examinations were little more than a test of memory and calligraphy skills. The whole education system focused on the preparation of the examinations and departed from intellectual vitality and political significance.[158] It is no exaggeration to say that in the Qing China all students studied for the examinations, therefore it is unsurprising that the products of this education system resulted in a class of intellectuals, gentry

[155] Hsü, *The Rise of Modern China*, p. 73.
[156] '万般皆下品，惟有读书高'
[157] Kuo and Liu, 'Self-Strengthening', p. 504.
[158] Chang, 'Intellectual Change and the Reform Movement, 1890-8', p. 330.

and officials that were intellectually moribund and lacking in creative thinking.[159]

Secondly, the study of science and technology consequently received no attention from Chinese intellectuals, fundamentally because people who studied them would not be as competitive as those who focused on Confucian classics in securing a place in the elite class. Science and technology were considered to be the undertakings of an artisan, and not worthwhile for the upper class. An advocate of modernisation once complained to the Imperial Court that in China '*the most skilful of the artisans will at most become a head artisan.* [Whereas in the West,] *he who can make a machine which benefits the country will become a prominent official, his family for generations can live on the trade and keep their positions hereditary.*'[160] In ancient China, artisans were the social group that had the strongest potential of science and technology, but the Imperial Examinations determined that they were excluded from the circle of elites.

Thirdly, the Chinese elites were imbued with the traditional Chinese ideology. A key element was that the traditional Chinese worldview was characterised by Sino-centrism in which the world was considered to be hierarchic and non-egalitarian, and the Chinese civilisation was the highest form. It was '*internal, large and high*' while the non-Chinese civilisations were '*barbarian*' and '*external, small and low*.'[161] Consequently, the Chinese elites had a strong sense of superiority over foreigners. The relations of the Chinese with non-Chinese peoples were '*coloured by this concept of Sino-centrism and an assumption of Chinese superiority*.'[162] Even though the Opium Wars proved that Chinese military was much less effective than that of the West, most of the Chinese elites still maintained this view. The Western countries, although militarily powerful, were regarded by Chinese officials as politically and ideologically inferior. This perspective had shaped the Qing Empire's attitude towards the West: on the one hand, some open-minded Chinese officials – the

[159] Ichiko, 'Political and Institutional Reform, 1901-11', p. 376-377.
[160] Kuo and Liu, 'Self-Strengthening', p. 498.
[161] Yen-ping Hao and Erh-min Wan, 'Changing Chinese Views of Western Relations, 1840-95' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), pp. 143-144.
[162] Immanuel C. Y. Hsü, 'Late Ch'ing Foreign Relations, 1866-1905' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 70, and see Hao and Wan, 'Changing Chinese Views of Western Relations, 1840-95', p. 70, 143.

Self-Strengtheners in particular – suggested that China should adopt Western weaponry (whilst many others refused to pick up Western weaponry); on the other hand, the wholesale Chinese elites looked down upon anything foreign and were reluctant to make any changes to the Chinese institutions.[163]

Fourthly, associated to the Sino-centrism worldview was the notion of dynastic cycle. F. Wakeman Jr. noted that in the eyes of Confucianists, '*history was not linear … it was a series of whirls moving forward through time without necessarily reaching a higher end.*'[164] Graff explained the notion of dynastic circle as follows:

> '*According to the notion of dynastic cycle, imperial regimes emerged out of the chaos of civil war to impose order and reunify the country. They enjoyed a period of vigour but then, after the passage of several generations, fell gradually into decline. Eventually rebellions broke out that brought down the dynasty and ushered in a new period of civil war, out of which new unifier would emerge to repeat the process. The traditional Chinese explanation for this dynastic cycle was wrapped in Confucian moralism and rooted in the ancient concept of the 'Mandate of Heaven'. Heaven gave its blessing to a dynasty founder on account of his superior virtue. When one of his heirs strayed from the proper* [traditional] *path …* [and] *did not mend his ways, rebellions would breakout and Heaven would transfer its support to a more virtuous leader and his new dynasty.*'[165]

According to the notion of dynastic cycle, a key factor that determined the rise and fall of Chinese empires was whether or not the rulers had observed the Confucian principles. In the eyes of conservative Qing officials, the fundamental cause of China's weakness in the 19th century was not that China was

---

[163] Japanese scholar of late Qing reform Hatano Yoshihiro pointed out that the Qing officials and literati never fully understood the external crises they faced mainly because they were schooled in the traditional examination system and thus were ignorant of the outside world. Elman, 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895', p. 289.

[164] Frederic Wakeman, *The Fall of Imperial China*, (New York: The Free Press, 1977), p. 55.

[165] David A Graff, 'State Making and State Breaking' in *A Military History of China*. Updated Edition, David Graff and Robin Higham eds., (Lexington: University Press of Kentucky, 2012), pp. 40-41.

insufficiently modernised, but was because that China failed to stick to the Confucianism orthodox firmly enough. Therefore, even the most moderate proposals of modernisation would subject to the opposition of Confucian hardliners, who believed that restoring the old order as the key to strengthen China.

2.4 Conclusion

This chapter has highlighted the relations between the 'fundamental structure' of a society and the strength of its naval power. Politics determined the efficiency of naval administration; economics determined the quantity of resources available to navy; and ideology determined a society's willingness to support navy.

Seapowers were usually characterised by representative governments, prosperous seaborne trade, and sea-loving social ethos; and, as this chapter has shown, these characteristics tended to be symbiotic with each other. In representative governments, the social groups that benefited from a powerful navy were usually better represented in the decision-making process, yet such a form of governance allowed a higher degree of delegation of power to authoritative professional bodies, which could increase the naval administrative and commanding efficiency. Seaborne trade facilitated the development of naval power not only because a navy was needed to protect trade, but also because the maritime economy and the navy were, to a great extent, synergetic with each other. Sea-loving societies usually had at its heart a prosperous maritime community. Such a community had its interests hinged on naval strength, and therefore provided strong support for the development of naval power. For these reasons, strong navies were usually stemmed from seapowers.

The Qing Empire was very different from seapowers in terms of politics, economy and ideology. The polity was a dynasty ruled by absolutist emperors; the economy was overwhelmingly agrarian and self-sufficient; the society centred on the gentry (i.e. Imperial examination degree holders); and the ideology was Confucianism. This was a system very stable in itself; but it was very ineffective in meeting the requirements of a steam navy.

In the political dimension, the perpetuation of autocratic Manchu rule was the fundamental concern. In the central government the emperor monopolised virtually all rights of decision-making, whilst the imperial ministries were largely titular. The relations between the central and local governments were essentially a tug-of-war for power, which in the late 19th century the latter gained the upper hand and the former was striving to turn the situation around. The inter-provincial relations were marked by a lack of cooperation and a degree of rivalry because local interests were usually the main concern of provincial leaders. The military of the Qing Empire had a large army at its core that was provincially organised and subjected to the check of civil officials. In the economic dimension, the Qing Empire had a self-sufficient agrarian economy as its main source of national wealth. As commercial activities and manufacturing were intentionally suppressed in order to protect agricultural production, science and technology were consequently underdeveloped. Seagoing was discouraged for political and security reasons, and therefore seagoing sectors withered. Land tax was the main source of governmental revenue in the Qing Empire, and the authorities refused to adopt more flexible economic and financial policies to the detriment of the development of indigenous industrial capabilities. Instead of extolling merchants and seaborne trade, the Qing government imbued its elites i.e. intellectuals, gentry and officials with Confucianism – an ideology that reinforced absolutism and agrarian economy. The Imperial Examinations as official selection mechanism had shaped the Chinese elites, making them intellectually unprepared for modernisation, reluctant to reform and disdained things foreign.

In short, with regard to the requirements of a steam navy, the Qing Empire's 'fundamental structure' had a low administrative efficiency, a scarcity of available resources, a social 'sea-blindness' and a strong inertia to refuse reform. This is in essence, the general background when the Qing Empire embarked on the building of a steam navy.

Chapter Three

The Statesmen and the Politics of the Chinese Steam Navy

This chapter will focus on three aspects: (1) the emperor and the ministers in the Imperial Court; (2) the provincial Self-Strengtheners; and (3) the contending views of the strategic significance of the steam navy. It will try to explain how the Qing Empire's 'fundamental structure' informed the views and actions of the statesmen committed to the build-up of the steam navy, and affected the politics behind its development. There is no such a thing as an apolitical navy. Navies are built by rulers, crewed by military men and employed for political ends. If this point is ignored, it is hard to explain why different nations developed varied levels of commitment to naval power, and why some became more successful in building a navy while others failed to do so.

3.1 The Members of the Imperial Court

If, in the context of the Self-Strengthening Movement, the Qing Empire could have counted on a navalist ruler, someone like Henry VIII, Peter the Great or Kaiser Wilhelm, or enlisted among its influential figures of power like Cardinal Richelieu or Yamamoto Gombei, the story of the Chinese steam navy could have been very different. However, as these figures had to emerge from within the Qing Empire's political, economic and ideological realities, this was almost impossible. Particularly at the highest level, it seems highly unlikely in retrospect

for the Qing Dynasty to have had a navalist emperor. To many Western navalist rulers, a navy was not an end *per se* but a means to an end. A navy not only protected their countries, but also played a key role in supporting overseas expansion, trade and colonial interests, the synergy of which would make a country wealthy and powerful.

In China, however, the situation was very different. Chinese emperors tended to attach only marginal importance to the navy because it played no significant role in the equation of the rise and fall of Chinese empires. The issues that determined the nation's greatness could hardly be addressed by naval power. Economically, the wealth of the nation came primarily from agriculture. Whether or not the vast agricultural area in China proper could be effectively administrated, determined to a considerable extent the nation's economic well-being. Militarily, the most menacing and persistent threat to the nation's security had always been cavalries of the nomadic tribes from the northern steppes. In the Qing Dynasty, alongside the northern nomads, a new type of threat – anti-Manchu revolts – emerged in the Chinese hinterland. Both threats required a large army – rather than a navy – to tackle. Priorities were therefore given to the army rather over the navy, and the fact that China was an agrarian power with a huge population enabled it to mobilise a very large army indeed. It was therefore not surprising that the navy was less important to Chinese emperors than to navalist rulers in Western Europe.

In Chinese politico-economic traditions, the navy was not connected to the nation's vital interests; it therefore received only intermittent attention from the absolutist emperors. Their indifference to seaborne trade and overseas interests is reflected in the Qianlong Emperor's reaction to the McCartney Mission and Batavia Massacre (see Section 2.2). The role of the traditional Chinese navy – the *water forces* – was little more than protecting the coast and arresting smugglers and pirates. Only in some exceptional cases did powerful navies emerge in China, such as the expeditionary fleet built by the Kublai Khan of the Yuan Dynasty (AD 1271-1368), and the Treasure Fleet built by the Yongle Emperor of the Ming Dynasty (AD 1368-1644).[166] However, these fleets were mostly an outgrowth of

[166] For reviews regarding the Chinese naval activities prior to the Qing Dynasty, see Zunpeng Bao, *中国海军史 Zhongguo Haijun Shi [The History of the Chinese Navy]*, (Taibei: Haijun Chubanshe, 1951). and Tieniu

continental power; none of the emperors that built them tried to establish a link between military and economy that characterised the seapowers in the West. The building of such fleets consumed a large amount of resources, but the nation benefitted little from them, and the fleets soon faded away as the emperors died or the empire's agenda changed.

Moreover, the Manchu rulers were very conservative; and they were conservative by necessity rather than choice.[167] As non-Han Chinese, the Manchus retained their legitimacy as long as they adhered to the Han Chinese traditions, which were predominantly Confucian. As Mary C. Wright observed, a Confucian society was of necessity an agrarian society: trade, industry, economic development of any form, were its enemy.[168] Therefore, the Qing emperors, albeit autocratic, were hemmed in by a sea-blind Chinese tradition. They had little leeway to pursue naval power even if they had the intention to do so, as the unorthodox nature of such a pursuit would put their legitimacy at risk. In short, in spite of the autocratic polity of the Qing Dynasty China, the emperors did not find themselves in a convenient position to promote naval power.

Even if, notwithstanding all the restrictions, the Qing Chinese emperors of the 19th century wanted to pursue a steam navy (with the benefit of hindsight we know there was no such desire), they would still not be able to attain any great achievements due to the adverse financial and security realities of the mid-19th century. The deep survival crises caused by internal revolts not only severely hindered the military Self-Strengthening efforts financially, but also forced the government to give strategic priority to put down the crises.[169] A memorial that the *Zongli Yamen* presented to the Throne in 1861 revealed the security agenda of the Qing Empire. It argued:

Zhang and Xiaoxing Gao, *中国古代海军史 Zhongguo Gudai Haijun Shi [A Naval History of Premodern China]*, (Beijing: PLA Press, 2006). The Yongle Emperor of the Ming Dynasty organised seven consecutive Treasure Fleet voyages between 1405 and 1433. The largest voyage among the seven consisted of 240 ships and 27,000 men. The voyages reached as far as the eastern coasts of the African continent. It was commonly believed that the purpose of these voyages was to show off the Ming Empire's power and wealth. Other explanations of the purpose of the voyages include: to find pathways to flank the Mongols who were harassing the Ming Empire's northern border, or to track down the whereabouts of the emperor's enemy in the dynastic struggle, who was believed to be at large. The Treasure Fleet voyages had no economic implications in the Western sense.

167 S. C. M. Paine, *The Sino-Japanese War of 1894-1895: Perceptions, Power, and Primacy,* (Cambridge: Cambridge University Press, 2003), pp. 358-359.

168 Wright, *The Last Stand of Chinese Conservatism*, p. 3.

169 Ibid., 96.

'*as to the* [security] *situation of today, the Taiping Rebellion and the Nian Rebellion … are threats as mortal as illness within* [a man's] *body. Russia shares a border* [with us and it] *is ambitious of encroaching on* [the territory of] *the Celestial Empire.* [This should be regarded as] an *affliction* [as close as] *of* [a man's] *upper body. Britons* [only] *have trading in their mind …* [they should be regarded as insignificant a threat as] *illness in* [a man's] *limbs. Therefore, it is the top priority to put down the Taiping Rebellion and Nian Rebellion; the second priority is to tackle the threat of Russia, whereas Britain should come the third*.'[170]

The security situation has improved since the late 1860s. The Taiping Rebellion and the Nian Rebellion were pacified, the Chinese army re-established control in north-western China and the tensions with Russia eased in the early 1880s. Financial difficulties were also partly relieved as the newly-established Imperial Maritime Customs Services opened up new sources of revenue. Some historians refer this period as the 'Tongzhi Restoration' or the 'Tong-Guang Restoration'.[171] The improvement of the domestic security situation coincided with intensified threats emanating from the sea: Japan's 1874 invasion of Taiwan and Russia's demonstration of naval power on the eve of the signing of the *Treaty of St. Petersburg* reminded the Chinese emperors of the empire's inadequacy in naval power. Nevertheless, the navy continued to remain low on the empire's agenda. The reason is obvious: a degree of naval power might be necessary to resist seaborne threats, but naval power had never been vital to China. A strong navy would not aggrandise the Qing Empire, which was fundamentally a continental agrarian power.

The lack of attention from the highest rulers had two direct adverse consequences on the development of the Chinese steam navy. First, the

---

170 CBYWSM-XF, Vol. 71, p. 18.

171 The 'Tongzhi Restoration' or 'Tong-Guang Restoration': in the aftermath of pacification of the mid-19th century domestic rebellions, the Qing Dynasty successfully reasserted the old order. Mary C. Wright put it: 'not only a dynasty but also a civilisation which appeared to have collapsed was revived … This was the T'ung-chih Restoration [Tongzhi Restoration].' Kwang-ching Liu, 'The Ch'ing Restoration' in *The Cambridge History of China Volume 10: Late Ch'ing 1800-1911, Part 1,* Ed. John K. Fairbank, (Cambridge: Cambridge University Press, 1978), p.447

emperor's attention towards naval modernisation lacked consistency. Research shows that throughout the three-and-a-half decades Self-Strengthening Movement, only three times did *maritime defence* draw strong attention from the highest ruler and end up in a nationwide top-down consultation.[172] The first was in the late 1860s and it was ignited by Robert Hart's (Inspector-General of Chinese Imperial Maritime Customs Services, in office 1861-1911) memorial *Observation by an Outsider* and Thomas Wades' (British Minister to China, in office 1869-1882) memorial *A Brief Exposition of New Ideas*.[173] The second was stirred up by Japan's 1874 invasion of Taiwan, and the third was triggered by China's defeat in the Sino-French War. The first discussion yielded no concrete results; the second prompted the integration of provincial fleets into regional navies (see Section 6.2); and the third contributed to the establishment of a Chinese Board of Admiralty – the *Haijun Yamen* (see Section 6.3). But the emperor's attention soon turned to other things as the threat disappeared. The development of the navy enjoyed little support and coordination from the emperor.

Second, the navy was only of secondary importance to the emperor, and from time to time he diverted the already tight naval funds to other endeavours he considered more important. J. Wang's research shows that a number of major projects during the Self-Strengthening period were funded by money re-directed from naval funds. Among many others were the military campaigns in Xinjiang, the reparation of the Margary Affair, the building of the Tongzhi Emperor's mausoleum, the Chinese Educational Mission to the United States, and disaster relief efforts in Hebei, Henan and Shandong province, etc.[174] From the

---

[172] See Hongbin Wang, *晚清海防：思想与制度研究 Wanqing Haifang： sixiang yu zhidu yanjiu [Coastal Defense in the Late Qing Dynasty: A Study on Theory and System],* (Beijing: Commercial Press, 2005), pp.48-74, 80-143, 196-220.

[173] In 1865, Hart submitted to the *Zongli Yamen* a memorial named *Observation by an Outsider* (局外旁观论); One year later in 1866, British diplomat in China Thomas Wade presented *A Brief Exposition of New Ideas* (新议论略). The two memorials underscored the importance of comprehensive modernisation to China's security, and stressed the advantages of railways, telegraphs, mining, schooling, Westernised army and navy, and diplomatic representatives. In particular, Wade warned that foreign powers today were different from the 'barbarians' of the past, and unless China recognised this fact and sought progress along Western lines the nation's fate would be sealed. See Hsü, 'Late Ch'ing Foreign Relations, 1866-1905', pp. 71-72. Wade's words terrified the Chinese elites, who were still yet to recover from the shock of the Opium Wars. Consequently, the Imperial Court launched a nationwide consultation on how to strengthen China's maritime defence against Western aggression.

[174] Jiajian Wang, *李鸿章与北洋舰队:近代中国创建海军的失败与教训 Li Hongzhang yu Beiyang jiandui:*

perspective of the navy, the diversion of funds severely impeded its development, but from the viewpoint of the emperor, however, all these expenses seemed to be of greater significance than strengthening coastal defence.

***

The above passages argued that the development of the steam navy could hardly gain support from the autocratic emperors of the Qing Dynasty China. Therefore, if there was any support for naval modernisation in the central government, it could only come from other members of the Imperial Court, i.e. the imperial family members or the senior courtiers. But also this was unlikely. The Qing Empire was an autocracy; the emperor tended not to tolerate any individuals other than himself to have real power, as it would enable those who have it to challenge his authority or even to become potential usurpers. Such concerns were not groundless. There were two domineering imperial officials that emerged in the Imperial Court: one in the late 17th century, the other in the early 18th century. Both were decorated military commanders who later wielded strong influence in the Imperial Court and posed great threats to the emperor's authority.[175] The Qing emperors had a lingering fear of such men. Preventing the emergence of assertive bureaucrats had become a key concern of the emperor.

The emperor himself was not attuned to naval views and wanted to hold power exclusively in his hands. This means that members of the Imperial Court would have had to challenge the emperor considerably to support the navy. In other words, the emperor tended to regard any promoter of naval modernisation as a challenger to his rule. The story of Prince Gong illustrates this point. Among the handful of senior imperial officials in the late 19th century Qing Imperial Court, nobody else was more suitable than Prince Gong to become a promoter of the steam navy. Prince Gong was the sixth prince of the Daoguang Emperor, half-brother of the Xianfeng Emperor and uncle of the Tongzhi Emperor. In addition, he was a key accomplice of Empress Dowager Cixi in the *Coup of 1861*,

---

jindai Zhongguo Chuangjian Haijun de Shibai yu jiaoxun (Jiaoding Ban) [Li Hongzhang and the Beiyang Fleet: The Failure and the Lessons of Naval Construction in Late Imperial China], Revised Edition, (Beijing: Sanlian Shudian, 2008), p. 384.

[175] They were Oboi 鳌拜 (c. 1610-1669) and Nian Gengyao 年羹尧 (1679-1726)

which made the latter the *de facto* supreme ruler of the Qing Empire for the next fifty years.[176] In the years that followed, Empress Dowager Cixi, who still lacked experience as a ruler, had to rely heavily on Prince Gong to bring the situation under control. Consequently, Prince Gong wielded considerable influences in the Imperial Court. Among the many titles he held in the those years were prince regent, grand councillor of the Grand Council, head of the *Zongli Yamen*, and chief minister of the Imperial Household.[177] These titles made him virtually the most powerful man in the Forbidden City.

In contrast to other officials in the Forbidden City who usually had conservative inclinations, Prince Gong was open-minded and knew the West better. In the Second Opium War, he remained in Beijing to take charge of the peace settlement with Britain and France whilst most of the other members of the imperial family and the Imperial Court fled. In the years after the Second Opium War, a new institution – the *Zongli Yamen* – was established, and Prince Gong became its head. The *Zongli Yamen* was regarded as the Chinese equivalent of a foreign office (but of less real power, as the emperor retained much of the power of decision-making).[178] The *Zongli Yamen* was not only in charge of foreign affairs but also of a number of modernisation projects, such as the promotion of modern schools, Western science, industry and modern means of communication.[179] Also directly affiliated to the *Zongli Yamen* was the Imperial Maritime Customs Service, arguably the most important financial source of the Self-Strengthening Movement. Undoubtedly, among the inner circle of the ministers in the Imperial Court, Prince Gong was most suited to promote naval modernisation and to contribute to the nation's naval power.

Prince Gong was determined to promote a steam navy. In various cases, he stressed that a Western-style navy would be a necessity for China's security in the future.[180] He used to remind the emperor: '*if we continue to drift along passively and do not eagerly seek to improve ourselves and forge ahead, trouble in*

176 For details of the Coup of 1861, see Hsü, *The Rise of Modern China*, pp. 262-266.
177 Hsü, *The Rise of Modern China*, pp. 306-307.
178 Kuo and Liu, 'Self-Strengthening', p. 504.
179 Hsü, *The Rise of Modern China*, p. 215.
180 Yangfan Li, *走出晚清: 涉外人物及中国的世界观念之研究 Zouchu Wan Qing: Shewai Renwu Ji Zhongguo De Shijie Guannian Zhi Yanjiu [Beyong the Late Qing: A Research concerning Personalities of Foreign Affairs and China's Word View],* Second Edition, (Beijing: Peking University Press, 2012), pp. 237-241.

the future will be even more difficult to deal with'.[181] In 1866 and 1874, he took initiative in promoting two nationwide discussions on maritime defence, which contributed to the development of the Chinese steam navy. Also, in the early 1860s and the second half of the 1870s, he twice tried to establish a centralised steam navy (but these efforts failed, see Section 5.3). He wrote multiple memorials to remind the Throne of the importance of a modern navy to China's security, and he managed to achieve a degree of Westernisation in the Imperial Guard and imperial educational institutions to promote modernisation within the Imperial Court.

But Prince Gong could only achieve so much. The *de facto* ruler at the time – the Empress Dowager Cixi – mistrusted his power and influence. In the two-and-a-half decades after the *Coup of 1861*, Empress Dowager Cixi, who felt capable enough in administrating state affairs, gradually revoked the titles that Prince Gong had gained in the aftermath of the coup. Among the accusations that the Empress Dowager charged him with were usurpation of power, clique-formation and overbearance. Consequently, Prince Gong was gradually side-lined, losing his zeal in state affairs and becoming restrained in conduct. In 1884, Prince Gong lost his power completely. In the remaining years of the Self-Strengthening Movement, he stayed away from the Forbidden City and spent most of his time in a Buddhist temple in suburban Beijing.[182]

Ideological conservatism was also used to contain Prince Gong's political influence. In 1862, the College of Foreign Languages (the *Tongwen Guan*) was opened in Beijing at the suggestion of Prince Gong (see Photo 3.1). The purpose of this college was to train foreign language experts that could support China's increasing contact with the West since the mid-19th century. Four years later in 1866, Prince Gong proposed to expand the repertoire of the college by adding the subjects of astronomy and mathematics to its curricula. This proposal, as Kuo pointed out, was aimed at earning the Throne's recognition of the legitimacy of *Western learning*.[183] It was subjected to ferocious attacks from Confucianism hardliners, who believed that *Western learning* and good moral character were antithetical. In the eyes of Confucian hardliners, modernisation entailed

[181] Hsü, 'Late Ch'ing Foreign Relations, 1866-1905', p. 91.
[182] Hsü, *The Rise of Modern China*, pp. 306-308.
[183] Kuo and Liu, 'Self-Strengthening', p. 528.

Westernisation, and learning from the West would undermine the ideological foundation of the Empire. Consequently, few students signed up for astronomy and mathematics lessons when they were opened.[184] Rumours were stirred up among scholarly-officials in Beijing that the *Zongli Yamen* under Prince Gong had treasonous intentions, and conservatives called Prince Gong 'the devil sixth' (Prince Gong was the sixth son of the Daoguang Emperor) due to his cooperation with 'devil foreigners'.[185] The College of Foreign Languages, due to its promotion of *Western learning* and connection to Prince Gong, was not a success.

In the political arena of the late 19th century, probably only Prince Chun's power was comparable to that of Prince Gong's, but he did more harm than good for the development of the Chinese steam navy. The reasons for this were also attributable to the autocratic polity of the Qing Empire. Prince Chun was the seventh son of the Daoguang Emperor, brother-in-law of the Empress Dowager Cixi, and father of the Guangxu Emperor. In 1885, he was appointed as minister of the newly established *Haijun Yamen* (the Chinese Board of Admiralty). Prince Chun was said to be a mediocre politician. He was afraid of the Empress Dowager Cixi and wanted to avoid Prince Gong's fate. He reconstructed the Summer Palace – which was burnt down in the Second Opium War – and a number of other imperial gardens in the hope that the Empress Dowager might retreat from the Forbidden City and relinquish her grip on state affairs. The funds to rebuild the Summer Palace came primarily from the budget of the *Haijun Yamen* that he headed, which was originally intended to be spent on purchasing ships from abroad. A commonly accepted calculation was that the works on the imperial gardens cost between twenty and thirty million *taels* (in contrast, *Ding Yuan* and *Zhen Yuan,* the two largest ironclad battleships that China bought in the Self-Strengthening Movement, cost 1.63 million *taels* each).[186]

Other people in the Imperial Court were much less likely to become promoters of a steam navy. They were either less motivated or lacked the power that would have enabled them do so. In short, it was very difficult for ministers

184 Kuo and Liu, 'Self-Strengthening', p. 530.
185 Known as '鬼子六' in Chinese.
186 For an estimation regarding expenditures on the re-construction of imperial gardens, see Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2,* p. 1129; and Bao, *The History of the Chinese Navy*, pp. 623-661.

in the Imperial Court and members of the imperial family to launch pro-navy reforms. In fact, it was difficult to pursue any reform without the consent of the highest ruler, which was the Empress Dowager Cixi during most of the Self-Strengthening period. Maintaining power was her ultimate concern and she regarded reforms as potential threats to her rule. In order to prevent her power from being rivalled, she kept the people around her under a careful check-and-balance regime. Ideological conservatism was used to counterbalance those who supported modernisation. In the case of Prince Gong, she launched a pre-emptive strike to eliminate the perceived threat to her rule. The consolidation of autocratic power came at the expense of pro-navy reforms.

3.2 The Provincial Practitioners of the Self-Strengthening Movement

Many present-day historians categorise the political elites of late 19th century China into two opposing groups: a 'Self-Strengthening faction' and a 'conservative faction'.[187] This perspective of Self-Strengtheners versus conservatives highlights the disagreement between the two different approaches to reinvigorate the empire: the former called for the adoption of Western ships and guns, while the latter stressed that the fundamental cure for China's problems was to restore the traditional Confucian order. But the division into two clearly demarcated groups gives a misleading impression that the Self-Strengthening Movement was a struggle between a 'Self-Strengthening faction' and a 'conservative faction', where each faction was a quasi-political party or a united body of statesmen. This perception is not completely true. A closer examination of the process through which the Self-Strengtheners emerged reveals that they were not a cohesive political faction.

A glance at the background of the Self-Strengtheners shows that a considerable number of them were former members of local militia forces, which played a major role in pacifying the mid-19th century domestic turmoil. Noteworthy among them were Zeng Guofan, who was the leader of the Xiang

[187] The Self-Strengthening faction is known as '洋务派' and the conservative faction is known as '守旧派' in Chinese.

Army; Zuo Zongtang, who was the leader of the Chu Army (an independent branch of the Xiang Army); and Li Hongzhang, who was the leader of the Huai Army. Many other key Self-Strengtheners also originated from the local militia forces. Shen Baozhen, Commissioner of the Fuzhou Navy Yard from 1868 to 1875 served in the Xiang Army. Guo Songtao, China's very first ambassador to Britain was also from the Xiang Army. Ding Richang, head of the Jiangnan Arsenal, was Li's subordinate in the Huai Army. Ding Ruchang (not to be confused with Ding Richang), commander-in-chief of the Beiyang Fleet, was also formerly a Huai Army man.

It was not a coincidence that the figures that constituted the main body of the Self-Strengtheners were mostly former members of local militia forces. As mentioned earlier, the Green Standard Army, the main standing army of the Qing Empire, became degraded as a fighting force from the 18th century onwards. A new type of army – local militias – emerged in the wars against the Taiping Rebellion and other domestic revolts in the mid-19th century. These local militia forces were more effective than the traditional armed forces, yet they were fundamentally different from them. In particular, the organisational structure of these local militia forces was at odds with that of the traditional armed forces. The traditional organisational structure compromised the command efficiency, but ensured that the old armed forces were 'safe' from usurpation against the Imperial Court. The local militia forces, on the contrary, increased their commanding efficiency at the expense of such 'safeness'. Taking the Xiang Army for example, all of its soldiers were recruited from Hunan province by officers to whom they owed their allegiance. The officers in turn pledged their loyalty to Zeng Guofan, the leader of the Xiang Army who had personally selected and commissioned them. The Xiang Army also remained largely independent from the Imperial Court in terms of finance and command. Therefore, the Xiang Army was to a great extent a 'private army' rather than the emperor's army. The same can be said about most of the other local militia forces, including Li's Huai Army and Zuo's Chu Army.[188]

These abovementioned characteristics of the local militia forces increased

[188] Ergang Luo, '清季兵为将有的起源 Qingji Bing Wei Jiang You de Ojyuan [The Origins of Private Armies in the Qing]', *Journal of Chinese Social Economic History*, Vol. 5, No. 2. (Jun. 1937), pp. 235-250.

their military effectiveness, but at the same time rendered them less 'reliable' in the emperor's eyes. Their nature as 'private armies' made them a concern for the Imperial Court. Concerns were raised in Beijing that the local militia forces would challenge the authority of the Imperial Court after the domestic rebellions were put down.[189] When the domestic wars neared their end, men in the local militia forces worried that they would be demobilised as soon as the war was over. Their concerns were not groundless. In less than a month after the supreme headquarters of the Taiping Rebellion was captured, the Imperial Court embarked on dissolving the Xiang Army, the most powerful one among the various local militia forces.[190]

To avoid the destiny of being dissolved, the members of the local militia forces needed to find a new *raison d'être.* From their association with foreign militaries in the anti-Taiping War, they learnt first-hand the superiority of Western ships and guns. For example, in a letter Li wrote to Zeng in 1863, he expressed his admiration of the Western weaponry. He said:

> '*I have been aboard the warships of British and French admirals and I saw that their cannons are ingenious and uniform, their ammunition is fine and cleverly made, their weapons are bright, and their troops have a martial appearance and are orderly. These things are actually superior to those of China.*'[191]

The local militia forces leaders were also aware that the traditional Chinese armed forces were reluctant to pick up modern weaponry.[192] These leaders saw a new *raison d'être* in military modernisation. A brief review of the reports that these local militia forces leaders sent to the Imperial Court shows that appeals for military modernisation appeared at an increasing frequency as the anti-revolt wars approached their end and eventually peaked at the second half of the 1860s when the wars were over. No wonder this was not a coincidence.

---

189 Ergang Luo, *湘军兵志 Xiangjun Bingzhi [A History of the Hunan Army]*, (Beijing: Zhonghua Shuju, 1984), pp. 181-182.
190 Luo, *A History of the Hunan Army*, pp. 181-191.
191 Ssu-Yü Teng and John K. Fairbank, *China's Response to the West: A Documentary Survey, 1839-1923,* (Cambridge, MA.: Harvard University Press, 1979), p. 69.
192 Kuo and Liu, 'Self-Strengthening', pp. 496-500.

Many local militia force leaders realigned with military modernisation as their new *raison d'être* in the aftermath of the mid-19th century turmoil, and a steam navy played an important part in it. The three local militia forces leaders, Zeng, Li and Zuo, came up with the same view that a steam navy would be a necessity to China. Zeng once stated to the Imperial Court that '*foreign-style steamships are a necessity …* [they] *could* [not only] *suppress rebels* [but would also] *be useful strategically in the long run*.'[193] Zuo also reminded the Imperial Court of the importance of a steam navy in various occasions in the first half of the 1860s. When the anti-Taiping War was over, Zuo argued that building a steam navy should be China's next priority and he built the Fuzhou Navy Yard.[194] Li also showed a strong interest in pursuing military modernisation – a steam navy in particular – as an alternative function for his Huai Army, although he felt less compelled to join Zeng and Zuo, because his army was still busy engaging a series of anti-revolt campaigns in the late 1860s.[195]

In the wake of the domestic wars of the mid-19th century, many local militia forces leaders were awarded important provincial offices. For example, Zeng Guofan was appointed the governor-general of Liangjiang (later transferred to the position of governor-general of Zhili province), Li Hongzhang became governor of Jiangsu province (later succeeded Zeng to became the governor-general of Zhili province), and Zuo Zongtang was made governor of Zhejiang province (and was soon further promoted to governor-general of Minzhe). These powerful positions enabled them to bring their proposal of building a steam navy into reality, because as previously mentioned, provincial governments began to enjoy an unprecedented level of autonomy consequent on the mid-19th century turmoil. These former local militia forces leaders, now provincial leaders, became, together with their old subordinates, the main promoters of the Self-Strengthening Movement.

However, this did not mean that the Self-Strengtheners formed a cohesive and coordinated alliance or quasi-political party among themselves. On the

193 ZGFQJ-ZG, Vol. 3, p. 1603. CBYWSM-TZ, Vol. 21, p. 21.
194 ZZTQJ-ZG, Vol. 3, pp. 58-61.
195 Ruicheng Wang, "'权力外移"与晚清权力结构的演变, 1855-1875 Yuanli Waiyi Yu Wanqing Quanli Jiegou De Yanbian [The "Outward Flow of Power" and the Evolution of the Late Qing Power Structure, 1855-1875]', *Modern Chinese History Studies*, Vol. 188, No. 2. (Mar.-Apr., 2012), pp. 28-46.

contrary, the relations between the Self-Strengtheners of different provinces from time to time showed rivalries rather than cooperation. This was partly because some of them *were* competitors in the mid-19th century anti-revolt wars when they were leaders of the local militia forces; and partly because the politico-economic framework of the Qing Empire encouraged provincialism and discouraged inter-provincial cooperation. When the former leaders of local militia forces became provincial practitioners of the Self-Strengthening Movement, the seeds of rivalries sowed in the old days became germinated and institutionalised.[196]

Two concluding points can be drawn from the above discussion to close this section. First, the Self-Strengthening Movement was primarily a Self-Strengtheners' – mostly former local militia forces leaders – undertaking, not a national effort. It should be understood that the emergence of modernised military forces did not yet mean that the regular Qing armed forces were supplanted. In most cases, the two existed in parallel. This restricted the amount of funds that the steam navy was able to secure from imperial coffers. The traditional military forces required around twenty million *taels* annually to maintain, whereas the steam navy was only promised four million *taels* per year at the height of its development.[197] Also, since the traditional military institutions remained dominant, it was very hard for the steam navy to keep itself clear of the influence of the traditional military institutions (which will be elaborated on in Section 4.4).

Secondly, the Self-Strengtheners were not a quasi-political alliance as the name 'Self-Strengthening faction' misleadingly suggests. On the contrary, a degree of internal rivalry existed among the Self-Strengtheners themselves, which was sometimes even more intense than those that existed between the

---

[196] That being said, we should not overly generalise and claim that rivalries dominated the relationships between all provincial practitioners of the Self-Strengthening Movement. Between some local Self-Strengtheners there was good cooperation. For example, Li Hongzhang's efforts to build the Beiyang Fleet were supported by Shen Baozhen, who was in charge of the Nanyang Fleet. Shen gave Li the four Rendel gunboats originally ordered for the Nanyang Fleet. See Kwang-Ching Liu and Richard J. Smith, 'The Military Challenge: The North-west and the Coast' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*, Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 248. But rivalries between provincial Self-Strengtheners did exist and produced adverse impacts on the effectiveness of naval modernisation, which will be addressed later in this thesis.

[197] Hsü, *The Rise of Modern China*, p. 62.

Self-Strengtheners and the conservatives. Hsü observed that the provincial promoters of the Self-Strengthening Movement competed rather than cooperated with each other and regarded their achievements as the foundation of personal power.[198] Driven by mixed motivations of personal ambition and provincialism, the various local Self-Strengtheners rarely formed alliances among themselves. The lack of coordination hampered the effectiveness and efficiency of naval modernisation projects.

3.3 The Contending Views of the Strategic Significance of the Steam Navy

Other Chinese elites' views of the steam navy are reflected in the debates around it. In late-19th century China, there was a lack of consensus on whether or not building a steam navy should be a strategic priority, and whether or not the steam navy was needed at all. Throughout the Self-Strengthening period, such disagreements were never solved. They emerged from time to time to strike at the root of the whole project of naval modernisation.

Some present-day historians tend to depict the people who disagreed with naval modernisation as 'villains'. This is because, with the benefit of hindsight, present-day historians know that it was the inadequate naval power that contributed to China's defeat in the Sino-French War and First Sino-Japanese War. Therefore the people who tried to impede the development of the stream navy should take some of the blame for the defeats. However, it should be pointed out that most of the people who disagreed with naval modernisation in the second half of the 19th century did not oppose it out of malice. On the contrary, most of them were determined patriots. The key difference that distinguished them from the Self-Strengtheners was that they had a different view towards how and what should be done to reinvigorate the empire. In this sense, they should not be regarded as objectors determined to thwart naval modernisation. Rather, they had in their mind a different strategic agenda.

The officials who disagreed with the Self-Strengtheners in building a steam navy were motivated by at least one of the following reasons (some had mixed

[198] Hsü, *The Rise of Modern China*, p. 288.

motivations). The first group consisted mostly of Confucian hardliners, who believed maritime defence should be conducted in conformity with Confucian ideology rather than by applying Western techniques. The second group consisted mostly of realists, arguing that a steam navy should not be considered as a priority because the empire had other more urgent issues to tackle. The third group was mostly driven by political rivalries and its members objected to naval modernisation because they believed that a flourishing steam navy would make the Self-Strengtheners too powerful to be brought under control.

***

As to the objections from Confucian hardliners, one of the most renowned cases happened during the 1874 maritime defence discussion. In the aftermath of Japan's 1874 invasion of Taiwan, the Imperial Court consulted a number of provincial officials with regards to how China should strengthen its maritime defence in reaction to the increasingly menacing Japanese naval power. A number of officials involved in the discussion suggested that China should adopt Western armaments as a means to protect itself from maritime aggressions.[199] Yu Lingchen, a conservative official, led the charge for an attack against Westernisation. His opinions were closely associated with the notion of dynastic cycle and Sino-centrism. He believed that learning from the West, in spite of the military benefits, would undermine the ideological foundation of the empire in the long run. In his memorial to the Throne, Yu argued:

> *'our ancient sages* [taught us to] *civilise barbarian* [foreigners] *with Chinese civilisation, whereas* [Self-Strengtheners like] *Li Hongzhang and Ding Richang are proposing to replace the Chinese* [superior civilisation] *with* [that of the Western] *barbarians'*. *I believe that maritime defence is a matter so important that a mistake at the foundation would lead to the destruction of the whole edifice* [in the long run]. [The nurturing of Confucian] *talent are China's top priority*

[199] Wang, *Coastal Defence in the Late Qing Dynasty*, pp. 97-101.

at this moment, [but] *what Li Hongzhang and Ding Richang suggested will exacerbate* [the lack of Confucian talent]. … *Building Western machines and ships will necessitate the adoption of Western learning, which will in turn necessitate that talent is to be selected according to whether or not one is good at Western learning* [instead of Confucian classics]. [Therefore] *although those who put forward such proposals* [of learning from the West] *were initially* [only] *trying to use* [barbarians' superior weapons] *against barbarians, and were not intending to persuade* [Chinese] *people to give up the fundamental Confucian principles of propriety, righteousness, honesty, and sense of shame. However, is there anything more dishonourable than learning from the Westerners? It is impossible to expect one to live up to …* [Confucian principles]… *while teaching them dishonourable* [foreign] *things.'* [200]

Yu suggested that for China, the fundamental solution of maritime defence was to restore the Confucian social order, which had been in decline since the mid-19th century. If the Confucian order was restored, Yu envisioned, all officials would be more devoted and the people would be more loyal. With respect to the military, Yu suggested that China should not fight foreign aggressors at sea. Instead, the army should be brought into play since China enjoyed, as he saw it, a degree of military superiority on land. In the attachment of this memorial to the Throne, he highlighted the threats posed by the Russians in the northeast and reminded the emperor that Russia was in fact the most menacing threat to China.[201]

Yu Lingchen was a typical guardian of traditional Confucian principles. In the eyes of officials like him, modernisation was a synonym for Westernisation, and Westernisation in turn meant a departure from Confucianism, as the two were considered antithetic. To Confucian hardliners, the adoption of Western techniques would undermine the ideological foundation of Chinese society and jeopardise the traditional social order in the long run. It should be pointed out

200 YWYD, Vol. 1, pp. 120-122.
201 YWYD, Vol. 1, p. 123.

that such a concern was not completely unfounded. Confucian principles did play a role in affecting the rise and fall of Chinese empires. Wakeman Jr. pointed out that in the absence of elaborate institutional checks on bureaucratic performance, the efficient administration of the Chinese dynasties had to rely upon Confucian norms of behaviour, and hence upon the officials' own sense of self-restraint.[202] The notion of dynastic cycle was not totally an illusion (though the notion of Sino-centrism largely was). Neither was discarding Confucian traditions an option open to the Manchu rulers of the Qing Empire. As foreign rulers, the Manchus retained their legitimacy to rule only as long as they successfully adhered to the Han Chinese traditions.[203]

***

The second group of opponents of naval modernisers based their arguments on realist – in particular economic and geo-strategic – imperatives. The Opium Wars and the domestic revolts of the mid-19th century crippled the empire financially as much as militarily. In 1872, Song Jin, grand secretary of the Grand Secretariat (the nominal cabinet of the Qing Imperial Government) handed in a memorial to the Throne arguing that China should stop building a steam navy. Song pointed out that the steamships not only had little practical value, but also brought a heavy financial burden to bear on the nation. In the memorial he said:

> *'a total amount of four to five million taels have been spent on building steamships in Fuzhou,* [which is] *a extremely heavy and wasteful expenditure.* [It is unwise] *if the steamships were intended for defending* [China] *against barbarians*, *because peace treaties have already been signed* [between China and the West]*.* [Building steamships] *would arouse unnecessary suspicions. Moreover, the ships were not capable of fighting on the high seas, as they are inferior to the foreigners' ships. …* [It is also unwise] *if the ships were intended for patrolling the seas and arresting pirates, because there are already water forces* [assigned to

[202] Wakeman, *The Fall of Imperial China*, pp. 55-69.
[203] Paine, *The Sino-Japanese War of 1894-1895*, p. 358.

that duty] *and if these* [water force] *ships were solidly built and commanded by men who are familiar with the coastal waters, they have no reason not to overcome* [the pirates]*. Why should we bother to build steamships alongside war junks and meaninglessly increase expenditure? If the ships are intended for transporting* [tribute] *grain … it is in fact much more expensive than traditional junk boats.*'[204]

In the same memorial, Song pointed out in a criticising tone that the pursuit of such novel and ingenious things as steamships could only be tolerated when the nation's economy was prosperous. Given that the empire at that time was still recovering from the calamities of the mid-19th century, the shipbuilding funds, he suggested, should be diverted to help the recovery. It is apparent that Song regarded the navy as a 'white elephant' to China. His view was not unprecedented. Nearly four hundred years ago, when the Chenghua Emperor of Ming Dynasty suggested resuming the Treasure Fleet voyages, Liu Daxia, the head of the Board of War of the Ming Dynasty, disagreed with him on the grounds that the expeditions wasted a great amount of financial and human resources and had in fact little practical value.[205]

Geo-strategy was another main concern from the realists' point of view. Traditionally, China was more concerned with the security of its land borders, which is reflected in the continuous building of the Great Wall throughout the nation's history. Serious maritime threats, in contrast, only emerged since the Opium Wars. The 1874 Japanese invasion of Taiwan intensified China's need for a modern navy. It coincided with the spread of racial minority revolts and the intensified Russian expansionism in the north-western China, which could only be tackled by an army expedition. Chinese elites at the time held divergent opinions on which one between the south-eastern coast or the north-western land frontier should be prioritised on the empire's security agenda.[206]

Li Hongzhang, leading spirit of the navalist Self-Strengtheners, asked the

---

[204] YWYD, Vol. 5, pp. 105-106.

[205] See Ming dynasty sources Congjian Yan, *殊域周咨录 Shuyu Zhouzi Lu [Extensive Inquiry of Faraway Places]*, p. 307. Qiyuan Gu, *客座赘語 Kezuo Zhuiyu [Idle Talks with Guests]*, pp. 29-30.

[206] For more details of the debate see Immanuel C. Y. Hsü, 'The Great Policy Debate in China, 1874: Maritime Defense vs. Frontier Defense', *Harvard Journal of Asiatic Studies*, Vol. 25. (1964-1965), pp. 212-228.

Imperial Court to suspend the military campaigns in the north-west and shift the funds to naval modernisation. Li's main argument was that the barren land of Xinjiang was of little agricultural value and not worth the cost of recovering it. In Li's words, postponing the recovery of Xinjiang would do no harm to the 'vitality' of China.[207] Zuo Zongtang, who at the time was in charge of the operations in Xinjiang, disagreed:

> '*since antiquity, China has always been suffering more intense security threats in the north-west than in the south-east* [coasts]. *Generally speaking, the south-east is flanked by the sea* [which favours defence], *whereas in the north-east steppe* [which lacks such tenable terrain], *superiority and inferiority is specifically determined by the amount troops* [deployed]. *… The reason why Xinjiang should be emphasised is because* [the security of Xinjiang is] *important to* [the security of] *Mongolia, and the reason why Mongolia should be defended is because* [the security of Mongolia] *is important to the defence of the capital city.*'[208]

Zuo also argued that the Western trading powers posed little threat to Chinese territory, whereas the Russian encroachment in Xinjiang was in fact a more imminent threat.

In spite of the Imperial Court's rhetoric that the defence of the coasts and the land frontiers were equally important, it *de facto* supported the latter. With the consent of the Imperial Court, Zuo raised a total number of 14.7 million *taels* for the campaigns in Xinjiang by borrowing from foreign banks, which were guaranteed by and eventually paid from the customs revenue.[209] The customs revenue, as previously indicated, was a major financial source for the Chinese steam navy. But the emperor, who was in charge of the allocation of the customs revenue, regarded the defence of land frontier as having prior claim on it. Hsü observed that '*there was a definite correlation between the weakness of the nascent Chinese navy and the Sinkiang* [Xinjiang] *campaign*'.[210] The Imperial

---

[207] LWZGQJ-ZG, Vol. 24, p. 19.
[208] ZZTQJ-ZG, Vol. 8, pp. 176-183.
[209] Kuo and Liu, 'Self-Strengthening', p. 515.
[210] Hsü, '*The Great Policy Debate in China, 1874*', p. 228?

Court supported Zuo because the Chinese military traditions paid more attention to the land than the sea, and the highest decision-makers were significantly more susceptible to appeals for frontier defence.

***

A third type of objection to naval modernisation came from political enemies of the navalist Self-Strengtheners. Compared with the aforementioned two types of oppositions, such rivalries were relatively inconspicuous. They were usually carried out under the guise of more justifiable arguments. For example, it is commonly believed that the abovementioned policy debate on maritime defence and frontier defence was to a considerable extent driven by the personal hostility between Zuo Zongtang and Li Hongzhang.

Another well-known incident of this kind happened between Weng Tonghe and Li Hongzhang. On the eve of the war with Japan, Weng Tonghe, the then head of the Board of Revenue, managed to persuade the Imperial Court to ratify his proposal of suspending the steam navy's acquisitions from abroad for two years, and redirect the money to flood-control and disaster relief.[211] This severely undermined the strength of Li's Beiyang Fleet, as the fleet heavily relied on foreign shipbuilders and arms-makers for equipment. In the early 1890s, most of the ships and guns that Li had acquired in the previous decades were obsolete and needed upgrade, but the lack of funds rendered this impossible.[212] Armament inferiority, the lack of cutting-edge ships and guns in particular, are commonly considered as the main causes of the Beiyang Fleet's defeat in the Battle of Yalu. Weng not only played a crucial role in thwarting the equipment upgrade of the Beiyang Fleet. He was also a leading hawkish figure in the Imperial Court and advocated a hard-line policy in dealing with Japan over Korea. A third party account commented that Weng wanted to exploit the war to win over Li in their personal rivalry. In the case of a war with Japan, Li would be the commander of the Chinese side and his Beiyang Fleet would be fighting the Imperial Japanese Navy. According to the account, Weng wished to see this

[211] HJDSJ, p. 15. WTHJ, Vol. 1, p. 70.
[212] LWZGQJ-ZG, Vol. 78, p. 53.

happen in the belief that equipment inferiority would increase the chance for Li to lose the war.[213]

Such rivalries were common in the political arena of the Qing Empire and the Imperial Court made little effort to solve them. On the contrary, it encouraged such rivalries to a certain extent to prevent the rise of powerful officials or coteries. In the late 19th century, the authority of the highest ruler was on the decline consequent on the turmoil of the mid-19th century. In order to counterbalance the rising prestige of local bureaucrats, emperors frequently resorted to fomenting internal rivalries. Li Hongzhang was a typical example. In worrying about the security situation of the late 19th century, the empire had to rely on strongmen like him to safeguard the empire. On the other hand, the Imperial Court was concerned that if left unchecked, such strongmen would dwarf the authority of the Imperial Court. In this context, a degree of rivalry was intentionally maintained and exploited by the emperor to derive a sense of security from acting as an umpire between the rivalling officials.[214]

3.3 Conclusion

The Qing Empire during the Self-Strengthening Movement was an autocracy; the emperor's personal wish played a significant part in deciding the nation's policy. Unfortunately for the navy, the Qing emperors were not navalist, fundamentally because naval strength had rarely affected the rise and fall of the country. The alien Manchu rule of the Qing Dynasty further impeded the development of the navy, because the emperors tended to uphold their legitimacy by adhering to the Chinese feudal-agrarian traditions that neglected the sea. It was also unlikely that supporters of naval modernisation could emerge from officials in the Imperial Court. Promoting naval modernisation required power, but the autocratic rulers tolerated no authoritative individuals. The story of Prince Gong

[213] JLSB, p. 6.

[214] Benjamin Elman pointed out that '*Qing emperors viewed horizontally-aligned groups of gentry-officials as factional threats to the sanctity of vertical loyalties that culminated in the person of the emperor himself.*' Benjamin A. Elman, 'Imperial Politics and Confucian Societies in Late Imperial China: The Hanlin and Donglin Academies', *Modern China*, Vol. 15, No. 4. (Oct., 1989), p. 405.

illustrated this point. In short, the Qing emperors were by no means navalist and they allowed nobody in the Imperial Court to have real power, a necessity for the promotion of a steam navy.

The naval modernisation of the Qing Empire was conducted at the provincial level, and its promoters, i.e. the Self-Strengtheners, were mostly former leaders of the local militia forces. They advocated naval modernisation partly because they knew that the standing armed forces (traditional *water forces* included) held an overall negative attitude towards modernisation, and partly because they needed the military modernisation projects as their new *raison d'être* – in other words, foundations of personal power – after the mid-19th century anti-revolt wars. Their status as non-standing armed forces leaders determined that the steam navy was not born to replace the traditional *water forces*, and the relations among the Self-Strengtheners themselves were characterised by a lack of cohesiveness and coordination.

The Chinese elites held divergent opinions towards the steam navy. The conservatives opposed it, as they believed that adopting *Western learning* would undermine the ideological foundation of the empire in the long run. According to them, *Chinese learning* and *Western learning* were antithetic. Realists argued that the navy was less of a matter of urgency compared to other issues, such as frontier security in the north-west, and that the naval funds should be redirected to address these exigencies. The development of the steam navy was also affected by the struggles among officials. The Imperial Court encouraged such struggles to an extent, as it could derive a sense of security from acting as an umpire between the rivalling coteries. Such was the political background of the Chinese steam navy. Its importance was not commonly recognised among the elites of the Qing Empire. The steam navy – in fact provincial steam navies – was little more than a handful of isolated enclaves scattered over an otherwise unsupportive country, with only intermittent and lukewarm support from the Imperial Court.

Photo 3.1: Dr. William A.P. Martin and his students in China's first *Western learning* institution – the College of Foreign Languages (*Tongwen Guan*).[215] Note the Chinese-style ambience. In 1866, it was suggested that the curriculum of the College of Foreign Languages should include astronomy and mathematics. Many conservative officials strongly opposed this proposal, fearing that the Confucian scholars – the vanguards of the Confucian empire – would be barbarianised (Westernised).

[215] W. A. P. Martin, *The Lore of Cathay: Or, The Intellect of China*, (Edinburgh and London: Oliphant, Anderson & Ferrier, 1901), p. 34.

Chapter Four

Officers of the Chinese Steam Navy

This chapter will focus on four aspects: (1) the recruitment of naval cadets; (2) the naval academies; (3) the advanced naval education; and (4) the senior commanding officers of the navy. It will try to explain the impacts of the Qing Empire's 'fundamental structure' on the officer corps of the Chinese steam navy. This is an aspect of crucial relevance. Notwithstanding a population of four hundred million, the Qing Dynasty China could hardly be considered as a nation rich in people 'following the sea', to use Mahan's words. In fact, the shortage of naval professionals was a more serious issue than the lack of ships and guns. Chester Holcombe, American ambassador to China in the Self-Strengthening period, commented that: '*just there lay the crucial point of entire business of recreating a Chinese … navy. So long as her supply of funds lasted, China could purchase anything* [she] *needed. … The whole … world was eager to supply her. But she could not purchase trained officers and disciplined soldiers in any market. They must by bred and educated in China, raised from among her own people*.'[216]

4.1 The Recruitment of Naval Cadets

The opening of the first Chinese *Western learning* educational institutions set the foundation for a friction with traditional education. This was the result of the

[216] Chester Holcombe, *The Real Chinese Question*, (New York: Dodd, Mead and Company, 1909), p. 136.

debate on whether or not *Western learning* should be borrowed to safeguard the empire. The imperial elites split into two opposing groups in this debate. On one side, there were the Self-Strengtheners who believed that China should adopt a degree of *Western learning*. Rallying under the banner of '*learn barbarians' superior techniques with which to repel the barbarians'*, the Self-Strengtheners believed that commanding a degree of *Western learning* could strengthen China militarily so that the nation would be more able to protect itself against 'barbarian' aggressions. On the opposite side were the conservatives who disproved of the deviation from the traditional pattern of education, which all the *Western learning* institutions – naval academies included – represented. They regarded them as a threat to the Chinese way of life.[217] Many Confucian hardliners believed that the calamities that China had suffered in previous decades were, to a great extent, caused by the society's deviation from Confucian principles. Consequently they argued that restoring Confucian order in Chinese society by reiterating Confucianism in public education was the fundamental cure for all of China's problems.

The two voices however were not equally strong. The Self-Strengtheners, though calling for Western-style education, did not intend to completely replace *Chinese learning* with that of the West. They limited the adoption of *Western learning* to military sciences and carefully avoided its impacts on the Chinese institutions. Even Li Hongzhang, the most vigorous advocate of military modernisation, held a reserved attitude with regard to the adoption of *Western learning*. Teng and Fairbank observed: '[Li Hongzhang] *thought that the Chinese political and educational systems and Chinese culture and customs were all superior to those of foreign countries – except for cannon, railway and machinery*.'[218]

The conservatives, in contrast, were more determined to defend the old order, and they were much larger in number. An overwhelming majority of the elite class supported the conservatives for two reasons: first, many of them had spent years of their life studying the Confucian classics before they emerged

[217] Knight Biggerstaff, *The Earliest Modern Government Schools in China*, (Ithaca, NY.: Cornell University Press, 1961), p. 71.
[218] Teng and Fairbank, *China's Response to the West*, p. 69.

from the Imperial Examinations; they were devoted disciples of Confucianism. Second, many Chinese officials distrusted foreign things and the Opium Wars further strengthened this view. A prominent Confucian hardliner once commented: '*why must we learn from foreigners? ... the foreigners are our enemies ... It cannot but end after a few years by driving the Chinese people fully to yield to foreigners.*'[219] Therefore, in the debate on *Western learning,* the voice against its adoption was louder than the voice in its favour.

As previously indicated, the Imperial Examinations were considered as the only recognised path to upward mobility in Chinese society. In the late 1860s and early 1870s, the pacification of the mid-19th century domestic rebellions was followed by a nationwide reinvigoration of the Imperial Examinations. Both the Imperial Court and the literati applauded it. From the viewpoint of the Imperial Court, this symbolised the restoration of the good order. From the perspective of intellectuals, it provided them with an opportunity to make up for the time lost during the years of turmoil. People engaged in the examinations with enthusiasm.[220] At this moment, some Self-Strengtheners proposed to open up 'special examinations' for *Western learning* alongside the traditional examinations of Confucian classics, in order to select talent for the cause of military modernisation.[221] They wanted to 'jump on the bandwagon' of the revival of the Imperial Examination to promote *Western learning* among Chinese intellectuals. They hoped that if such proposals were implemented, *Western learning* would gain the acceptance of Chinese intellectuals; but these proposals fell on deaf ears.

Two points can be drawn from the passages above: (a) the Confucian scholars and general officialdom held a hostile attitude towards *Western learning*; and (b) Confucian classics dominated the main pathway to honour and success in Chinese society, whereas *Western learning* was excluded from it. It was against this background that the earliest educational institutions for *Western learning* were opened in China; first the College of Foreign Languages (*the Tongwen Guan*) in Beijing in 1862, and then the Fuzhou Naval Academy in 1867. The public

---

219 Biggerstaff, *The Earliest Modern Government Schools in China*, p.72.
220 Wright, *The Last Stand of Chinese Conservatism*, p. 80. Also see Kwang-Ching Liu, 'The Ch'ing Restoration' in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Ed. John K. Fairbank, (Cambridge: Cambridge University Press, 1978), p. 478.
221 CBYWSM-TZ Vol. 99, p. 30. Wang, *Research on the Qing Dynasty Examination System*, pp. 176-178.

attitude towards students of *Western learning* and the self-perception of students of *Western learning* are reflected in the following description offered by an official of the conservative bloc:

> *'No respectable Chinese would matriculate in it* [the Tongwen Guan]. *No man young enough to still have hopes of advancement in any other career would cast in his fortune with that of the College. The few who came were men who had failed in the official career – broken down hacks to whom the stipend offered by the yamen* [the Zongli Yamen] *proved dearer than their reputation. ... They were looked down upon by their literary brethren as renegades and traitors to the cause. They felt that they were so themselves. One of them ... admitted ... that outside the yamen ... he represented himself as a copyist or clerk. He never acknowledged himself to be a student of the College* [of Western learning]*.'*[222]

This description might have been exaggerated to an extent as the writer himself was a conservative official, but from this extract we can distil the intensity of the hostility of the conservatives; that is, the mainstream ethos of Chinese society towards *Western learning*.

It was not hard to imagine that in this context, most of the Chinese students, as long as they had the wherewithal and the intelligence to stay in the Confucian mainstream, would be hesitant to pursue *Western learning*, as it promised no obvious rewards. Consequently, few reputable households were willing to send their sons to such schools. The quantity and quality of students enrolled at the institutions for *Western learning* was rather low: a considerable portion of the students in the College of Foreign Languages was made up of middle-aged mediocrities who had enrolled for a pension.[223] The memoirs of Dr. W.A.P. Martin, an American scholar who served in the *Tongwen Guan* as a teacher in the 1860s, recorded that many of the students who volunteered for *Western learning* were dropouts of the mainstream educational system.[224]

In the same sense, recruiting was a headache for the Fuzhou Naval Academy

222 Biggerstaff, *The Earliest Modern Government Schools in China*, pp.119-120.
223 Hsü, *The Rise of Modern China*, p. 271.
224 Martin, *The Lore of Cathay*, p. 17.

and the other naval academies established later on.[225] In order to attract more students, many naval academies offered a number of incentives. First, students who volunteered for naval academies were usually paid rather generously. Apart from free meals, residence and medical care, naval cadets were usually offered a monthly allowance of three to four *taels*; those of senior grade or rated as performing above-average received an allowance as high as ten *taels* or more.[226] This was an amount even higher than the salary of low-ranking officials in the civil service system.[227] This allowance, in the words of Li Hongzhang '*would be sufficient for a family of eight to have a decent life*'.[228]

Second, students who volunteered for naval academies were also promised appointments on the basis of military merit upon their graduation. The regulation of the Fuzhou Naval Academy stipulated:

> '*all who complete the study of ship command and those who learn to build ships in conformity with designs will be given military rank. Persons have civil rank who enter the school to study shall still be permitted advancement as civil officials, although used in the navy, in order to encourage effort.*'[229]

This meant that for civilian students, they would immediately receive a military rank when they graduated.[230] Students who had attended the Imperial Examinations, and had already secured a degree before joining the naval academies, would get a position in the navy immediately after graduation, while having their civil ranks preserved, as civil ranks were usually more highly regarded than military ranks.[231]

Third, the naval academies from time to time lowered the 'entrance

---

[225] Bao, *The History of the Chinese Navy*, p. 690. PLA Navy Headquarters eds., 近代*中国海军 Jindai Zhongguo Haijun [Modern Chinese Navies]*, (Beijing: Haichao Publishing, 1994), p. 157. Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 1,* p. 609.
[226] Bao, *The History of the Chinese Navy*, p. 14, 75, 82, 95. Rawlinson, *China's Struggle for Naval Development*, p. 57.
[227] DQHD-GX , Vol. 21, p. 9.
[228] Jiang, *Dragon Flags over the Navy*, p. 147.
[229] QMHJSL, pp. 377-378.
[230] Bao, *The History of the Chinese Navy*, p. 690.
[231] Ibid. This stands in sharp contrast with the majority of Imperial Examination degree-holders who usually had to wait ten to twenty years before they received an appointment. Hsü, *The Rise of Modern China*, p. 80.

threshold' and held special admissions to relieve the shortage of recruits. In particular, in order to increase the number of recruits, the cadets were encouraged to introduce their relatives, friends and other acquaintance to join the naval academies.[232] It is evident that such policies would make the selection criteria even more porous and negatively affect the quality of recruits. This, in combination with the first two incentive policies, resulted in the recruitment of students of unsuitable age, mediocre talent, and unenthusiastic about a military career, as well as opportunists who considered joining the navy as a shortcut to wealth and power (for the negative impacts on the officer corps see Section 4.4).

The aim of these incentive policies was to make the naval academies more competitive vis-à-vis mainstream educational institutions by opening up an alternative route of personal advancement. However, these policies had many side effects. The most noteworthy side effect was that the naval academies became even more despised by the conservatives. The conservatives were discontent with the fact that generous stipends and extraordinary promotions were held out as an inducement, which would, as they saw it, have a degrading effect on the morale of the upright scholars and officials. A conservative official criticised that such policies were trying to:

> *'*[immorally] *deviate people from the honourable path of keju* [Imperial Examinations] *and induce them with promotions and silver for the sake of* [learning Western] *tricks.* [Such a practice should be condemned because] *it stressed fame and fortune but overlooked moral integrity. How is that possible to expect real achievements from morally corrupt men?'*[233]

A considerable number of the students entered the naval academies were old-fashioned Confucian scholars who had involuntarily departed from their original course, rather than would-be military men who were eager to learn about modern warfare. Yan Fu was a typical example.[234] Joining the Fuzhou

[232] PLA Navy Headquarters eds., *Modern Chinese Navies*, p. 157. Bao, *The History of the Chinese Navy*, pp. 693-694.
[233] CBYWSM-TZ, Vol. 47, p. 16.
[234] Yan Fu is sometimes known by his previous name Yen Tsung-kuang

Naval Academy in 1867, Yan was among the earliest group of students at the institution. Before that, he had received Confucian education in traditional schools, but his father's death when Yan was fourteen years old made it impossible for him to continue his education in a traditional school.[235] Instead, he joined the Fuzhou Naval Academy, largely because the school had no tuition fee and offered its students a generous stipend. He received systematic naval education in the Fuzhou Naval Academy and, as he was indeed a talented man, achieved good scores. In 1877, he was sent to the Royal Naval College at Greenwich in England, together with other elite students, for advanced education as a commanding naval officer.

Yet it seemed that he was never really interested in becoming a naval officer. When he finished his first year of study at Greenwich (all the Chinese cadets at that time attended a nine-month sub-lieutenant course at Greenwich), he chose to study for another year, while all the other Chinese cadets went to various British Royal Navy ships to gain hands-on experience.[236] Because of his outstanding academic achievement, he was given a teaching position in the Tianjin Naval Academy when he returned to China in 1879. Later, he was promoted to be superintendent of that Academy in 1890.

In spite of his position as the superintendent of the Tianjin Naval Academy, he seemed to be more interested in taking Imperial Examinations. He took the Imperial Examination four times in the late 1880s and early 1890s, but failed all of them. In a poem written to a friend, Yan complained that he was now forty years old but still a 'teacher', and that nobody understood his ambition to become an honourable mainstream official by taking the Imperial Examinations. In the same poem, he expressed regret for taking up *Western learning* when he was young because he was now regarded by people as a 'barbarian child'.[237]

In the years after the First Sino-Japanese War, Yan became a translator. His greatest fame came from his translation of major Western political, economic and philosophical writings. Among his most important works were the

---

[235] Quchang Wang, *严几道年谱 Yan Jidao Nianpu [A Biographic Chronology of Yan Jidao],* 1936. Reprint. (Shanghai: Shanghai: Shanghai Book Store Publishing House, 1991), p. 4.

[236] Yan Fu volunteered for a second term at Greenwich College in 1978-79. See Foreign Office Record FO. 17/794.

[237] YFJ, Vol. 2, p. 361.

translation of T.H. Huxley's *Evolution and Ethics*, J.S. Mill's *On Liberty* and *Logic*, Herbert Spencer's *A Study of Sociology*, and Edward Jenk's *A History of Politics*. As Hsü saw it, the key message that Yan tried to express through his translations was the differences between China and the modern West in their attitudes towards human energy.[238] The West exalted action, assertiveness, struggle and dynamism in order to actualise the unlimited human potential. In contrast, in the Qing Dynasty China, the attitude was quite the opposite. The ways of the Sages discouraged the development of the people's capacities and inhibited the free flow of their vital energies.[239] Yan turned to philosophical thinking to find the fundamental cause of his sense of loss, and what he disclosed was the precise reason why the Qing Empire's ideological principles prevented the nation from becoming strong at sea.

4.2 The Naval Academies and their Teaching and Training

The disagreement between educational institutions of *Chinese learning* and *Western learning* did not mean that students within the schools of Western learning were to be exempted from the commitment to *Chinese learning*. Under the slogan '*Chinese learning for the fundamental structure, Western learning for practical use*', *Western learning* had to take a backseat to *Chinese learning* after all. To prevent students from becoming too Westernised, the Fuzhou Naval Academy had Chinese classics as a part of its curriculum. In an 1867 memorial to the Throne, navy yard commissioner Shen Baozhen reported that all students in the naval academy were required to study *The Sacred Edict of the Kangxi Emperor* and *The Classics of Filial Piety*, as well as writing essays in Chinese, in addition to their more specialised subjects. Although the Fuzhou Naval Academy was an institution for *Western learning*, he reported, there was no excuse for becoming less Chinese.[240] After 1882, every Wednesday was dedicated to the study of Chinese classics.[241] It is hard to know exactly how much time was allocated to

238 Hsü, *The Rise of Modern China*, p. 422.
239 Ibid.
240 SWSGZS, p. 813.
241 Bao, *The History of the Chinese Navy*, p. 696.

the study of Chinese classics, but it is certain that the naval academies attached fundamental importance to their study.[242] Henry N. Shore, a British naval officer who visited the Fuzhou Naval Academy in the 1870s, observed: '*candidates are examined as to their knowledge of the Chinese classics, and until recently no one was admitted unless he had a good knowledge of the classics and the literature of his own country.*'[243]

Incorporating classics as part of a military officer's education was not unique to China. Many foreign militaries at that time also included their countries' classics as a key element of officer education. The study of classics was considered necessary to build a military's identity and to cultivate a sense of loyalty. For example, the Imperial Japanese Navy also had classics as an important part of their officer education to preserve the nation's culture and traditions in the navy.[244] However, in the case of China, being taught the classics as part of a naval education had several drawbacks. This was not only because the learning of classics consumed a considerable amount of time that could have been used for military training; more importantly, classics were a vehicle of ideology, and the Chinese ideology *per se* had an inhibiting effect on naval modernisation.

As previously indicated, the Qing Dynasty version of Confucianism was an ideology designed to reinforce China's absolutist monarchy and feudal-agrarian order. It offered a set of moral principles that suited the traditional Chinese society rather than its sea-going activities. For example, in the very first entrance examination held by the Fuzhou Naval Academy in 1867, candidates were asked to compose an essay on the topic of filial piety.[245] This was a core value of the Confucian social order. On this subject the key Confucianism classic – the Analects – preached: '*while his parents are alive, one must not go away to a distance*'.[246] It is obvious that such a creed was more compatible with an agrarian power with a defensive army rather than a state actor with the

---

[242] PLA Navy Headquarters eds., *Modern Chinese Navies*, p. 204. Biggerstaff, *The Earliest Modern Government Schools in China*, p. 209. Rawlinson, *China's Struggle for Naval Development*, p. 57.
[243] Henry N. Shore, *The Flight of the Lapwing: A Naval Officer's Jottings in China, Formosa and Japan*, (London: Longmans, Green, and Co., 1881), p. 228.
[244] Alessio Patalano, *Post-war Japan as a Sea Power: Imperial Legacy, Wartime Experience and the Making of a Navy*, (London: Bloomsbury Academics, 2015), p. 31.
[245] Wang, *A Biographic Chronology of Yan Jidao,* p. 4.
[246] *The Analects*. Book II: Li Ren 19 in Confucius. D. C. Lau, tran., (London: Penguin Books, 1979), p. 74.

ambition of having an ocean-going navy. Another example of the adverse impacts of elements of the traditional ideology on naval modernisation was that Zuo Zongtang, the founding father of the Fuzhou Naval Academy, named the naval academy an *artisan bureau* as opposed to a proper school.[247] This name implied the inferiority of the naval cadets vis-à-vis those who received a classical education in mainstream schools. The four constituent functional groups of the traditional Chinese society were scholars, peasants, artisans and tradesmen, in descending order of importance. Naval cadets were categorised under the social group of artisans and considered less respectable than Confucian scholars and peasants.

Moreover, a closer look at the contents of *Chinese learning* and *Western learning* shows that the two focused on different subjects. *Chinese learning* was centred on literary and humanistic studies. This came at the expense of science and technology, which constituted the essence of *Western learning*. The differences between the two made it very hard for students who were accustomed to *Chinese learning* to pick up *Western learning*. Even though, in the eyes of James Carroll, dean of the department of theoretical navigation of the Fuzhou Naval Academy, the Chinese students were '*diligent and attentive to their work*' and '*intelligently they have nothing to lose in a comparison with the boys of Western lands*', they still suffered from a very high dropout rate.[248] A 1874 report presented to the Chinese authorities by Prosper Giquel, head foreign advisor of the navy yard, shows that in the branch of naval architecture, teaching staff had met with difficulties in '*bringing* [the students] *to the stage of advancement*'; and in the branch of theoretical navigation, '*out of the one hundred and five pupils who entered the school only thirty-nine remain; six are dead; the other sixty have had to be sent away, after a course more or less prolonged, as incapable of following out the course of study.*'[249] The different and, in many ways, irreconcilable aims of Chinese and Western learning were a key cause of students' learning difficulties.

---

[247] Zuo named the Fuzhou Naval Academy as '求是堂艺局'. QMHJSL, pp. 377-378.
[248] Shore, *The Flight of the Lapwing*, p. 228.
[249] Prosper Giquel, *The Foochow Arsenal, and Its Results: From the Commencement in 1867, to the End of the Foreign Directorate, on the 16th February, 1874*, H. Lang tran., (Shanghai: Shanghai Evening Courier, 1874), p. 20.

Also, as Chinese elites were reluctant to make institutional changes to embrace Western learning, a clear-cut demarcation between Chinese learning and Western learning remained throughout the Self-Strengthening Movement. The various Chinese naval academies hired a considerable number of foreign teachers and instructors, and used foreign languages – English and French – as their working language. At the initial stages of modernisation, the use of foreign languages and reliance on foreign teachers and instructors was understandable because China had a very weak foundation in modern nautical science and technology. But the fact that the naval academies kept on hiring teachers and instructors from the West throughout the entire Self-Strengthening period revealed that Chinese society was reluctant to assimilate Western learning into itself. In recounting a visit to the Fuzhou Naval Academy in the early 1890s, nearly two-and-a-half decades after Western learning was introduced into China, Adm. Edmund R. Fremantle noted:

> '*the teaching is good, and the students are only too anxious to learn; but most of the knowledge so acquired was wasted through the jealousy of the mandarins of European education; so that the best thing for these young men to do in their own interests was for them the endeavour to forget all they had learnt at college* [naval academy] *on account of its supposed inferiority to things Chinese!*'[250]

Consequently, few students perceived that becoming a naval officer was an honourable undertaking. It was observed that many of the cadets in the naval academies preserved their traditional scholarly appearances rather than put on a martial appearance as a military officer. Key military qualities such as virility and physical strength received much less attention than they deserved.[251] In the eyes of Shore, the cadets there were:

---

[250] Edmund R. Fremantle, *The Navy as I Have Known It: 1849-1899*, (London: Cassell and Company Ltd., 1904), p. 400.

[251] It was observed that the Chinese naval cadets spend more time on studying than on taking exercises: '*indeed, their love of* [academic work] *sometimes carried them far into the night, and they required to be checked, else their health would be impaired …* [however] *such a thing as taking exercise on principle being a thing unheard of.*' Shore, *The Flight of the Lapwing*, p. 164.

> '*weak, puny creatures, without a bit of spirit or a spark of ambition, effeminate to a degree … out of school they just mope about or work at their tasks, they never play at a game … on the whole a Buddhist Monastery would be more congenial to their tastes than watch-keeping at sea*'.[252]

Chinese observations noted the same phenomenon. One said that the cadets looked too 'bookish' to be military men.[253] Guo Songtao, Chinese ambassador to Britain, noted in his diary that the elite Chinese cadets sent to Greenwich Naval College were notably weaker than their English counterparts in terms of physical strength.[254]

***

At this point, the achievements of the various Chinese naval academies should be examined. The Fuzhou Naval Academy was the leading institution in naval education and training. Among all of the Chinese naval academies opened during the Self-Strengthening Movement, it was the earliest, biggest and most successful. By the start of the First Sino-Japanese War, it had the largest number of graduates, and almost all the commanders of the capital ships of the Chinese steam navy were Fuzhou graduates.[255] In Fuzhou, officer cadets started their professional education with a course in theoretical navigation that was taught entirely in English. During a course of three-and-a-half years, cadets studied various subjects, including arithmetic, geometry, algebra, plane and spherical trigonometry, nautical astronomy, theoretical navigation and geography.[256] The classroom teaching was followed by a two-year course in practical navigation, in which '*the theoretical and practical branches of knowledge requisite in the captain of a ship*' was taught.[257] According to Giquel, upon the completion of these two

[252] Shore, *The Flight of the Lapwing*, pp. 228-229.
[253] LWZGQJ-PLHG, Vol. 19, pp. 40-41.
[254] Songtao Guo, *伦敦与巴黎日记 Lundun yu Bali Riji [Diaries in London and Paris]*, (Changsha: Yuelu Shushe, 1984), p. 450.
[255] The Fuzhou Naval Academy also offered education for naval architects and engine-room officers. This chapter will primarily focus on deck officers.
[256] Biggerstaff, *The Earliest Modern Government Schools in China*, p.214.
[257] Ibid., 216.

courses the cadets were expected to be able to '*navigate in sight of land*'.[258] Some above-average students were even good enough to be qualified as captains.

In the late 1870s, as the development of the Chinese steam navy gained pace, the shortage in naval professionals once again became a salient problem. There were two approaches to meet the growing demand for naval officers: one was to further expand the Fuzhou Naval Academy; the other was to establish new naval academies in other regional maritime defence districts (for the division of maritime defence districts see Section 6.2). In principle, the former solution had greater potential as it would be much more cost-effective. The Fuzhou Naval Academy also already had a solid foundation and rich experience in teaching and training, whereas the other regional maritime defence agencies had to start from scratch. But the various regional maritime defence authorities did not pool resources to strengthen the Fuzhou Naval Academy; instead they established naval academies of their own. From 1881 to 1890, five new naval academies sprung up along Chinese coasts. The Beiyang Superintendent, patron of the Beiyang Fleet, established the Tianjin Naval Academy in 1881, and the Weihaiwei Naval Academy in 1890. The Guangdong provincial government, which was in charge of the Guangdong Fleet, established the Guangdong Naval and Army Academy in 1886. The Nanyang Superintendent, patron of the Nanyang Fleet, established the Jiangnan Naval Academy in 1890. Even the Manchu Imperial Guard established the Kunminghu Naval Academy in Beijing next to an artificial lake in the Summer Palace in 1887.

In spite of the growth in the number of naval academies, the number of graduates did not increase proportionally. The cost-effectiveness of the Chinese naval officer education was very low. Up to 1894, the total expenditure on naval education had reached a staggering 3.05 million *taels*.[259] The number of graduates, however, did not show a related increase (see Table 4.1). Apart from the Fuzhou Naval Academy and the Tianjin Naval Academy, which had 139 and eighty-eight students qualified as junior line officers respectively, the rest of the naval academies had very limited achievements. The First Sino-Japanese War

[258] Giquel, *The Foochow Arsenal, and Its Results*, p. 32.

[259] This number includes the expenses of the three naval education missions to Europe, but the expenditure on the education mission to the US is not included, as only a small portion of the latter group of students joined the navy when they returned.

broke out before the first group of students in the Weihaiwei Naval Academy and the Jiangnan Naval Academy had finished their courses. The Kunminghu Naval Academy originally had twenty-four students in its first group of cadets, but fifteen were diverted to army units half way through the course and only nine made it to the stage of practical navigation. The second class of forty students of the Kunminghu Naval Academy finished the course in theoretical navigation in 1893, but only two were qualified to proceed to practical navigation.[260] The Guangdong Naval Academy and Army had forty-eight graduates, but many were transferred from other subjects of Western learning, such as botany or law studies, to the naval course. Their qualifications were questionable.[261]

Most of the later-established naval academies failed to attain a teaching standard comparable to that of the Fuzhou Naval Academy. In fact, they were all modelled after the Fuzhou Naval Academy.[262] Apart from reproducing the curriculum and the administration system of the Fuzhou Naval Academy, some even transferred teaching staff and students from Fuzhou.[263] Yet, living up to a standard as high as that of Fuzhou was difficult for them, mainly due to financial difficulties. Both the Nanyang and Guangdong Naval Academy had to cut the number of teaching staff and to lay off students due to a shortage of funds.[264] Only the Tianjin Naval Academy attained a standard comparable to Fuzhou and managed to make some improvements by refining the curriculum, prolonging the duration of courses and enhancing hands-on experiences.[265] The quality of education offered by the various naval academies can hardly be qualified as good.

In addition, the various regional maritime defence agencies were reluctant to help each other in improving the quality of naval education. In an 1891 memorial to the Throne, Liu Kunyi (the then Nanyang Superintendent and patron of the Nanyang Fleet) complained that Li Hongzhang (the then Beiyang Superintendent and patron of the Beiyang Fleet) refused to let Liu's Jiangnan Naval Academy

260 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 1,* p. 612.
261 Ibid., 623.
262 LWZGQJ-ZG, Vol. 52, p. 7. Bao, *The History of the Chinese Navy*, p. 782, 804, 812, 816-817.
263 QMHJSL, p. 389. Wang, *A Biographic Chronology of Yan Jidao*, p. 8. LWZGQJ-ZG, Vol. 40, p. 47; Vol. 42, pp. 25-26; Vol. 52, p. 7. LWZHQJ-PLHG, Vol. 19, p. 20. Bao, *The History of the Chinese Navy*, p.776
264 Bao, *The History of the Chinese Navy*, p.777, 807
265 ibid., 786-787, 789-790.

cadets join the Beiyang Fleet for further training, and to then get them commissioned into the Beiyang Fleet upon completion, as previously agreed.[266] Li told Liu that there were no vacancies for these young officers. However, almost at the same time, Li was petitioning the Imperial Court for establishing a new naval academy within his jurisdiction – which later became the Weihaiwei Naval Academy – because, according to Li, there was an '*urgent need for* [naval] *talent*' to fill the growing berths in his Beiyang Fleet.[267]

Regionalism was the main reason for the low effectiveness of Chinese naval officer education. The country's lack of a tradition of a national naval force drawing upon Chinese seafaring communities (which was weak and considered heretic, especially in the Qing Dynasty) and of a solid foundation in modern science and technology, meant that establishing new naval academies had to done from scratch.[268] These entry-level academies that replicated similar types of training, without seeking to cover all the layer of naval education in a coordinated and comprehensive fashion, lowered the cost-effectiveness of Chinese naval education. The naval academies of the various regional maritime defence agencies copied the Fuzhou Naval Academy, but they did not enjoy equally strong financial support, and the qualifications of the foreign instructors that they hired was not guaranteed. In retrospect, had they pooled their resources to strengthen the Fuzhou Naval Academy, the cost-effectiveness of the naval education would have been much higher. But they were reluctant to cooperate with each other, and neither was there an institutional mechanism to incentivise such cooperation. Apart from the Fuzhou and Tianjin Naval academies the others failed to make any substantial achievement.

---

266 QMHJSL, p. 80.

267 QMHJSL, p. 405.

268 The Chinese seafaring communities were very weak and marginalised in the society. C. Ng observed that '*seafaring people made the* [Qing] *authorities uncomfortable because they were not under official surveillance*.' Chin-keong Ng, 'Information and Knowledge: Qing China's Perceptions of the Maritime World in the Eighteenth Century' in *The East Asian Maritime World 1400-1800: Its Fabrics of Power and Dynamics of Exchanges*, Angela Schottenhammer ed., (Wiesbaden: Harrassowitz Verlag, 2007), p. 92.

	Naval academies (year of establishment)	Modules	Total expenditure (in taels)[269]	Number of graduates up to 1894
Fuzhou Navy Yard	Fuzhou Naval Academy (1867)	Naval Architecture, Navigation and Naval Engineering	820,864[270]	91 in naval architecture 139 in navigation 95 in engineering
Northern Superintendent	Beiyang Naval Academy (1881)	Navigation and Naval Engineering	591,423	88 in navigation 59 in engineering
	Weihaiwei Naval Academy (1891)	Navigation	117,811	0
Manchu Imperial Guards	Kunminghu Naval Academy (1887)	Navigation	190,000	9 in navigation
Guangdong Province	Guangdong Naval and Army Academy (1887)	Navigation and Naval Engineering	471,432	48
Southern Superintendent	Jiangnan Naval Academy (1890)	Navigation and Naval Engineering	185,400	0

Table 4.1 Naval academies established until 1894: affiliation, modules, expenditure and number of officers graduated.[271]

269 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 1*, pp.687-691.
270 Number does not include the expenses on the Naval Education Missions to Britain and France.
271 Wang, *Li Hongzhang and the Beiyang Fleet*, p. 225. Bao, *The History of the Chinese Navy*, pp. 790-791, 796, 804, 811. QMHJSL, pp. 395-396, 434-460. Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 1,* p. 623.

4.3 The Naval Educational Missions Abroad

A closer look at the teaching and training in the Fuzhou Naval Academy shows that the training that the cadets received only covered the basic skills of captaining single steamships. Other skills required of a naval commander were largely absent. Giquel's 1874 report revealed:

> *'some of them* [naval cadets] *might be placed aboard foreign men-of-war, where for two years they would act the part of officers, and would assist in that capacity not only in the handling of individual vessels, but also in the combined movements of many ships united into squadrons. They would also become familiarised with different kinds of cannon and firearms, which we have not been able to present for their examination.'*[272]

War at sea was much more than sailing single ships. It also involved another area of study – naval tactics. In this sense, the education in Fuzhou and all the other naval academies of China – as they were copies of the Fuzhou Naval Academy – was also inadequate. How to fill the gap between being able to sail single steamships and being able to command battles at sea was a problem had to be addressed by Chinese naval educators.

In 1873, Fuzhou Navy Yard Commissioner Shen Baozhen stressed to the Imperial Court the need for sending naval academy graduates abroad for advanced studies on shipbuilding and naval warfare. Elite students of naval architecture, he said, should be sent to France to study in-depth the principles of shipbuilding and of the evolution of naval technology. Elite students of navigation, he argued, should be sent to England to pursue in-depth studies in the principles of sailing ships, naval training and naval warfare. He pointed out that these students should devote three to five years to advanced studies and, upon their return to China, a new generation of cadets should be sent abroad to fill the vacancies they left behind. Shen expected that in this way there would be

[272] Giquel, *The Foochow Arsenal, and Its Results*, p. 32.

a steady flow of trained officers coming back to China.[273] A number of other leading Self-Strengtheners supported this proposal. Among them were the then Beiyang Superintendent Li Hongzhang, the then Nanyang Superintendent Li Zongxi, and the founding father of the Fuzhou Navy Yard, Zuo Zongtang,[274]

From Shen's memorial and his supporters' attitude, it can be discerned that they intended to address the inadequacy of Chinese naval education – i.e. the gap between being able to sail single steamships and being able to command battles at sea – by continuously sending students abroad. Admittedly, China was not the only country sending young officers abroad for advanced training, as it can be seen on the *Navy List* of the British Royal Navy that there were also a number of foreign officers serving aboard British men-of-war in the second half of the 19th century to gain practical experience. But China's reliance on Britain for advanced naval education (and on France for naval architecture) was much stronger and more structural. Achieving autonomy in advanced naval education required institutional changes which the Self-Strengtheners were reluctant to make. Instead, they were more inclined to look to Western seapowers for advanced naval education, as this strategy could meet their educational requirements while minimising the impact on the Chinese institutions at home.

The degree of China's reliance on the West for naval modernisation can be reflected in the number of students sent abroad. The first batch of thirty students was sent to Europe in 1877.[275] If it were not for the financial constraints, the first naval educational mission would have been much larger. Initially forty-nine students were planned to be sent overseas, where they were supposed to stay for five years. But the size of the mission was cut down to thirty students and the duration of study shortened to three years due to financial difficulties.[276] In 1879, when the first group of students returned to China, Shen presented another memorial to the Throne, appealing for more students to be sent to Europe. In rather poetic language, he said that China had to continue sending students abroad to '*draw water directly from the fountainhead*'.[277] An 1884

[273] SWSGZS, Vol. 4, pp. 64-65.
[274] HFD, II, Fuzhou Navy Yard, pp. 480-481, 486-489, 498-499.
[275] Twelve students of navigation were sent to England and eighteen students of naval architecture were sent to France.
[276] LWZGQJ-PLHG, Vol. 18, pp. 32-33.
[277] QMHJSL, pp. 387-388.

memorial to the Throne presented by Li Hongzhang revealed that he saw theoretical navigation, practical navigation and study abroad as the three mandatory steps for a cadet to go through before becoming an elite officer of the Beiyang Fleet.[278]

It can be clearly seen that the Self-Strengtheners would rather institutionalise the studying aboard project than solve the inadequacy of Chinese naval education by promoting institutional changes at home. On this basis, China's reliance on the West for advanced naval education became structural. In contrast, Japan also sent a considerable number of its elite students abroad in the initial stage of its pursuit of naval power; but in the late 1870s, Japan began to turn away from Western assistance and it achieved a degree of autonomy. A key reason for this was that Japan not only sent students abroad to acquire knowledge and expertise, but also reformed its institutions at home. The combination of those two components enabled Japan to establish an independent naval system, but China refused to do so.[279] An anecdote retold by Adm. Fremantle illustrates this point. Luo Fenglu was one of the first Chinese students sent abroad. He studied in King's College London in the late 1870s and returned to China to become Li Hongzhang's secretary. Adm. Fremantle mentioned in his memoir:

> '[Luo] *was secretary to Li Hung Chang* [Li Hongzhang] *when I was in China, a very able man, speaking and writing English perfectly. Li Hung Chang is reported to have said to him: "I don't know how it is, we send our men to Europe and America, and have foreign instructors in our colleges, as do the Japanese, but we do not seem to derive the advantage from their instructions which the Japanese do"; to which Loh Feng-Loh* [Luo Fenglu] *replied "That is quite true, I was a classmate of the Marquis Ito* [Itō Hirobumi] *in England; he is now prime minister of Japan, and I am your Excellency's secretary*."'[280]

[278] QMHJSL, p. 32.
[279] David C. Evans and Mark R. Peattie, *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy, 1887-1941*, (Annapolis: Naval Institute Press, 1997), p. 12.
[280] Fremantle, *The Navy as I Have Known It*, pp. 400-401.

It was very hard for the Chinese steam navy to turn away from dependence on the West for advanced naval education. Achieving this goal required institutional changes, but these were less likely to happen in China because the very purpose of the Self-Strengthening Movement was to protect the old institutions.

From the late 1870s to the late 1880s, a total of thirty-five officer cadets were sent to England in three groups.[281] The first group consisted of twelve officer cadets and arrived in England in mid-1877. Half of them entered the newly-opened Royal Naval College at Greenwich for a nine-month sub-lieutenant course.[282] The other half boarded various British Royal Navy ships immediately, and they were later joined by the students who finished their studies at Greenwich.[283] This first group of students finished their studies and returned China in late 1879. The second naval educational mission consisted of four officer cadets. The first two arrived in England in 1882. They first went to Greenwich for a nine-month sub-lieutenant course, then spent a year aboard British Royal Navy ships and later returned to Greenwich for a gunnery lieutenant course.[284] The other two students followed that same course but started one year later. This second group of students returned to China in the mid-1880s. The third naval educational mission had nineteen students. Twelve entered Greenwich in two batches and afterwards served aboard British Royal Navy ships for one to two years. Three entered the gunnery school HMS *Excellent*. Upon graduation, one went to Royal Arsenal at Woolwich to further his knowledge in gunnery, while the other two were sent to British warships. Two others joined British ships immediately when they arrived in England, then one of them entered Greenwich, and the other one returned to China due to illness. Apart from one student who died during his stay in England, the rest returned to China in the late 1880s.

Meanwhile a closer examination of the results of the naval education missions abroad shows that they could hardly be qualified as successes. First, the cost-effectiveness of the naval educational missions was very low. The various

---

281 There were another thirty-four naval architects sent to France during the same period of time. Wang, *Li Hongzhang and the Beiyang Fleet*, p. 226.
282 ADM 1/6426
283 FO 17/768, and *Navy List*, 1877-1879
284 FO 17/939, pp. 87, 180. FO 17/1009, pp.97-98. FO 17/1034, p.48

missions were arranged and funded by regional authorities.[285] This meant that not all maritime defence districts benefited equally from the missions. Only better off regional maritime defence agencies – the Beiyang Superintendent and Fuzhou Navy Yard – could afford to send students abroad, and most of the returning young officers were commissioned into the elite Beiyang Fleet. The total expense of the three naval educational missions was 674,151 *taels*, averaging at 9,770 *taels* per person (a total number of sixty-nine students were sent abroad: thirty-four naval officer cadets to England and thirty-five naval architects to France).[286] This was extremely expensive, especially taking into consideration that many of the naval architects trained in France stayed idle when they returned to China due to the decline of the Fuzhou Navy Yard (see Section 5.2). The naval educational missions lacked sustainability.

Second, the presence of a language barrier lowered the effectiveness of young officers studying aboard. Consequent on the rejection of a Russian student in early 1877, concerns were voiced in the Royal Naval College at Greenwich about foreign students' proficiency in English.[287] A preliminary English examination was set up to weed out foreign candidates who did not have an adequate command of English. A regulation issued by the British Admiralty in June 1877 required that '*candidates will … be required to satisfy the authorities of the College that they possess an adequate knowledge of English and sufficient proficiency in the subjects of instruction.*'[288] Even though the Chinese students had already been taught in English in China for at least five-and-a-half years (three-and-a-half years classroom learning plus two years aboard a training ship), there was still a considerable number who failed to pass the English test. The study of English consumed a considerable amount of their time and lowered the results of their years abroad. A *Zongli Yamen* report after the First Sino-Japanese War criticised that the study of English had consumed an excessive amount of time to the detriment of the real effect of studying abroad.[289]

---

285 LWZGQJ-ZG, Vol.28, pp. 21-22.
286 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 1*, pp. 692-693.
287 ADM 116/117
288 ADM 203/2
289 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 1*, p. 673.

Last, but most importantly, it is doubtful whether those missions fulfilled their very purpose of closing the gap between being able to sail single steamships and being able to command battles at sea. The first generation of cadets who studied in England in the late 1870s was not allowed to join other British students and they had to '*reside and mess outside the precincts* [of the Greenwich college]'.[290] Only from the second mission onwards were the cadets allowed to join the classes at Greenwich in the capacity of private students. But a closer comparison between the curricula of Chinese naval academies and that of the Greenwich Naval College shows that the two were largely the same. In other words, the study in Greenwich was little more than a repetition of what the Chinese cadets had already learnt in the Fuzhou Naval Academy (see Photo 4.1).

It was also questionable how much experience they derived from the time spent aboard British Royal Navy ships. Giquel wanted them to act as officers, so that they could familiarise themselves with fleet manoeuvring and naval tactics. But Adm. Fremantle mentioned in his memoirs that Ye Zukui, who later captained the Beiyang Fleet's protected cruiser *Jing Yuan,* was '*not allowed to do duty*' when he was aboard HMS *Invincible* (known as Yeh Tsoo-kwei in the memoir).[291] Whether or not the other Chinese students were given the opportunity to act as officers is unascertainable, but even if they did act as officers – which is highly unlikely – it remains questionable to what extent their experiences helped them when they returned to China. The second half of the 19th century was an era of explosive technological development, in which the ships and guns changed rapidly. The Royal Navy ships aboard which they served in the 1870s were hugely different from the ships that they later commanded in China in the 1880s and 1890s (see Photo 4.1 and Photo 4.2).

[290] Adm. Fanshawe to the Admiralty, ADM 1/6423
[291] Fremantle, *The Navy as I Have Known It*, p. 422.

Name in Standard Chinese Pinyin /Name on the Navy List	HMS Ship Served	Chinese Ships Captained
Liu Buchan/Lew Poo Chin	Minotaur/Raleigh	Ding Yuan(定远)
Lin Taizeng/Lin Tsai Tsan	Penelope/ Achilles Black Prince	Zhen Yuan (镇远)
Jiang Chaoying/Chung Chow Ing	Defence	Cheng Qing (澄庆)*
Huang Jianxun/Wang Kien Shoon	Bellerophon	Chao Yong (超勇)
Jiang Maozhi/Kiang Mow Tye	Agincourt	Jian Sheng (建胜)*
Lin Yingqi/Lin Ying Khe	Agincourt	Wei Yuan (威远)
Fang Boqian/Fang Peh Kien	Euryalus/Spartan	Ji Yuan (济远)
He Xinchuan/Ho Sin Chuan	Boadicea	Jing Qing (镜清)*
Lin Yongsheng/Lin Yung Sing	Minotaur	Jīng Yuan (经远)
Ye Zukui/Yin Choo Kwei	Invincible	Jìng Yuan (靖远)
Sa Zhenbing/Soh Ching Ping	Monarch	Kang Ji (康济)
Yan Fu/Yen Tsung Kwang	-	-

Table 4.2 List of Chinese naval cadets of the first naval educational mission to England: the British Royal Navy ships they served and the Chinese steam navy ships they later commanded.[292]

* The *Cheng Qing* was a 1,268-ton composite gunboat built and owned by the Fuzhou Navy Yard Fleet. It was sunk in the1884 Battle of Fuzhou. The *Jian Sheng* was a British-built Rendel gunboat belonging to the Fuzhou Navy Yard Fleet. It was also sunk in the 1884 Battle of Fuzhou. The *Jing Qing* was a Fuzhou-Built 2,200-ton cruiser. It served the Nanyang Fleet, and its service was extended into the Republican Era. The rest of the ships belonged to the Beiyang Fleet; most were sunk or captured in the First Sino-Japanese War.

[292] Wright, *The Chinese Steam Navy*, p. 31.

4.4 The Senior Commanding Officers

Senior officers of the Chinese steam navy deserve special attention due to their key role in the chain of command. The officials that occupied higher positions in the chain of command were mostly statesmen in charge of policy-making. Officers that occupied lower positions in the chain of command were mostly junior officers in charge of manning weapons and machines. These senior officers were significant because of their duty to translate war objectives set by policy-makers into specific military actions executed by junior officers. Before the development of communications technology that enabled authorities ashore to take the direction of battle into their own hands, afloat senior officers were in most cases the highest authority present in war. These senior officers were simultaneously expected to be warriors, politicians and administrators. Their competence determined to a considerable extent the success or failure of each military action. Within the Chinese steam navy, senior officers comprised three backgrounds: those transferred from traditional *water forces*, those professionally educated by naval academies, and foreign officers.

***

As previously indicated, military modernisation was the Self-Strengtheners' undertaking, not China's. The modernised forces were little more than a modernised offshoot of an otherwise traditional military institution. H. Wang's research shows that during the Guangxu Reign (1875-1908), half of the memorials to the Throne categorised under 'shipbuilding' still pertained to the building of junk boats for traditional *water forces*, and only about a half were centred on the building of steamships for the steam navy. [293] M. Jiang's study of the Fujian *water forces* reached the same conclusion.[294] The Chinese steam navy did not supplant the old-fashioned *water forces*; rather, the two existed in parallel with each other.

Therefore, it was very hard for the steam navy to remain unaffected by

[293] Wang, *Coastal Defence in the Late Qing Dynasty*, pp. 485-486.
[294] Jiang, *Dragon Flags over the Navy*, p. 94.

traditional *water forces*. As the number of steamships being built increased in early 1870s, a problem emerged: sailing these ships required a high degree of professionalism, but there was a lack of such professionals among the Chinese people. The nation lacked a seafaring community, modern science and technology, which were all essential for a functioning steam navy. Some regional fleets hired foreign professionals to captain the steamships, but an 1870 Imperial Edict decreed that all the steamships '*must be commanded by Chinese nationals*'.[295] As a trade-off, Chinese who had worked aboard foreign steamships and had learnt how to sail them were hired to command the ships of the Chinese steam fleet. J. Wang's research shows that in the mid-1870s, men of such origins captained eight of the thirteen capital ships of the Fuzhou Navy Yard fleet.[296]

However, these people might have been capable of sailing steamships, but they were hardly good at being military commanders. Guo Songtao (Chinese ambassador to London from 1877 to 1879) noted in his diary an anecdote retold by John Fryer:[297]

> '*In 1874, Chinese coasts were on alert as Japan landed troops on Taiwan Island* [Taiwan was part of Fujian province by 1874]*. A steam ship with a total crew of around three hundred men was ordered to garrison the Wusong Estuary. No sooner the order was given than about sixty to seventy men asked for sick leave. Around a half of the crew quitted before a delayed departure. Only roughly twenty remained aboard when the vessel arrived at the Wusong Estuary.*'[298]

Despite being ethnically Chinese, many of these men were in fact Chinese diaspora who had grown up in Southeast Asia, and were therefore considered

---

[295] YWYD, Vol. 2, pp. 2776-277.

[296] Wang, *Li Hongzhang and the Beiyang Fleet*, p. 77.

[297] John Fryer (1839-1928) known as 傅兰雅 in Chinese, was a British national who spent a considerable amount of his time in China in the translation bureau of the Jiangnan Arsenal. See Doris Sze Chun, 'John Fryer, the First Agassiz Professor of Oriental Languages and Literature, Berkeley'. *Chronicle of the University of California, No. 7, Changing Places: Scholars Here and Abroad*. (Fall 2005) http://www.cshe.berkeley.edu/publications/changing-places-scholars-here-and-abroad

[298] Guo, *Diaries in London and Paris*, p. 40. The name of the ship was not mentioned in Guo's diary. A cross-check of historical records shows that the ship mentioned was probably *Ce Hai* (测海) of the Nanyang Fleet. The ship was captained by Xu Chuanlong, who served aboard a foreign steam merchantman before joining the Chinese steam navy.

not fully trustworthy by Mandarin officials.[299] Shen Baozhen (the first Navy Yard Commissioner, in office 1867-1875) reported to the Imperial Court that many of them were not fully imbued with Chinese culture and customs. The report also claimed that because the foreign ships aboard which they obtained their seamanship were not fighting ships, many of them were not accustomed to military life.[300] Shen petitioned the Imperial Court to appoint a senior military officers to command the Fuzhou Navy Yard Fleet, so that the Chinese captains who used to be on foreign steamers would develop more 'feelings of loyalty and patriotism', and become better trained militarily.[301]

The Imperial Court appointed senior *water force* officers as senior commanders of the Fuzhou Navy Yard Fleet. This was a landmark appointment that changed the nature of the fleet. Before this point, the steam fleet was exclusively a Self-Strengtheners' undertaking and was kept away from the influence of the traditional *water forces*. Now the transfer of senior officers opened up a channel through which the *water forces* could exert influence on the steam navy. The most consequential among the many problems that the *water forces* transmitted to the Chinese steam navy via personnel transfers was an operational doctrine that did not suit a steam fleet. As previously indicated, the water forces did not make up a navy in the Western sense. Their operational doctrine was more in line with the traditional Chinese army than that of a modern Western-style steam navy.

As senior officers of the traditional *water forces* were transferred to the steam fleet, they brought along with them an unsuitable doctrine. For example, Luo Dachun was one such senior officer. He was appointed as commander-in-chief of the Fuzhou Navy Yard Fleet in early 1873. An extract from his diary shows that training of the fleet under his command was conducted in a *water force* fashion:

> '[at around five in the morning] *I set sail aboard* the Yang Wu *and commanded the* Wan Nian Qing, Fu Bo, An Lan, Mei Yun, Jing Yuan, Zhen

[299] C. Ng observed that '*the Qing state was especially suspicious of their subject who were employed by foreign countries as … interpreters or as crew members of foreign trading junks.*' Ng, 'Information and Knowledge', p. 92.
[300] YWYD, Vol. 2, pp. 277-278. SWSGZS, Vol. 4, pp. 43-44.
[301] YWYD, Vol. 2, pp. 277-278.

Wei, Chang Sheng, Hai Dong Yun, Fu Xing *and* Ji An, *ten ships in total.* [I] *passed down the order to raise a triangular blue-bordered flag on the mizzenmast to order the various ships to get ready for the exercise. Afterwards, a triangular yellow dragon flag was raised; the various ships answered by raising flags one by one.* [This was the signal to] *weigh anchor and set sail. At seven in the morning,* [the squadron] *arrived at the … training ground. A small triangular yellow dragon flag was raised on the mizzenmast; the various ships answered by raising flags.* [This was the signal to] *unfurl the sails. A small triangular yellow dragon flag and a large rectangular white flag were raised; the various ships answered by raising flags.* [This was the signal to] *furl the sails. A small square red flag and a rectangular red flag were raised.* [This was the signal to] *practice rifles and naval guns. A triangular blue-bordered red flag and a rectangular five-coloured flag were raised.* [This was the signal to] *take a break for one hour. After a short while, a rectangular five-coloured flag was raised on the foremast.* [This was the signal to] *resume exercising. A large rectangular red flag was raised on the foremast; the various ships answered by raising flags.* [This was the signal to] *hold naval guns exercise. A rectangular black flag was raised on the foremast; the various ships answered by raising flags.* [This was the signal to] *hold manoeuvre exercises. A long flag was raised on the foremast.* [This was the signal to] *hold sampan exercises. A small triangular dragon flag and a triangular blue-bordered red flag were raised on the mizzenmast; the various ships answered by raising flags.* [This was the signal to] *land and hold exercises onshore. It was at dusk when the drill of British and French foreign guns finished, a '令'-lettered flag was raised, troops were gathered and the ships returned.'*[302]

[302] See Dachun Luo, 'Entry of the 13th Year of the Tongzhi Reign, the 3rd Month, the 16th day' in *台湾海防并开山日记 Taiwan Haifang Bing Kaishan Riji [The Defence and Development of Taiwan, 1874-75: The Journal of Brigade-General Luo Dachun]*, David Pong comp., (Taibei: The Economic Research Department, Bank of Taiwan, 1972). The training ship of the Fuzhou Naval Academy *Yang Wu* was also captained by a senior officer transferred from the traditional *water forces*. It was noted that the *Yang Wu 'carried the flag of an admiral, but what this officer's* [the admiral] *functions were I could not discover, for he rarely appeared on board, and when he did, shut himself up in a small highly scented den, somewhere in the middle of the ship, from which he seldom or ever emerged. … The only part of the performance in which the admiral took any active share was the payment of the men and witnessing punishments.*' Shore, *The Flight of the Lapwing*, pp.

The extract from Luo Dachun's diary shows that the training of the Fuzhou Navy Yard Fleet followed the *water forces'* doctrine, which in turn followed that of the traditional army's, as the former usually played a complementary role to the latter. No wonder such training would not make the fleet a capable fighting force at sea.

Usually the *water forces* did not go far away from land, as they were supposed to play a complementary role to the troops on land. The steam fleets were infected with this problem and its operational range was confined to coastal waters. It was criticised that the trainings of the Fuzhou Navy Yard Fleet under the command of the officers transferred from traditional *water forces* were '*little more than firing guns in coastal waters on days of calm wind and tranquil waves*',[303] and the so-called '*traversing the ocean*' went '*no further than Sheshan Island* [an island about 75km from the Wusong Estuary, near Shanghai]'.[304] There is evidence that senior officers transferred from traditional *water forces* commanded the Fuzhou Navy Yard Fleet until the eve of the Battle of Fuzhou, in which the fleet was annihilated.[305]

Arguably, the Nanyang Fleet had the same problem as the Fuzhou Navy Yard Fleet, because it too had a considerable number of its senior officers who had originated from the *water forces*. A study shows that in the early 1870s, among the five steam warships that constituted the Nanyang Fleet, apart from one ship whose record is missing, three of the five ships were commanded by senior officers transferred from the traditional *water forces*.[306] The autobiography of Wu Dating, head of the steamship training bureau (*lunchuan caolian ju*) of the Nanyang Fleet from 1870 to 1877, noted that the training regulations of that fleet was a mixture of Western and Chinese methods.[307] There is evidence that senior officers transferred from the traditional water forces retained the commandership of the Nanyang Fleet throughout the Self-Strengthening Movement.[308] Consequently, the modernisation of the Fuzhou Navy Yard Fleet

---

234-235.

303 YWYD, Vol. 2, p. 414.

304 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty*, Vol. 2, p. 1020.

305 Jiang, *Dragon Flags over the Navy*, p.177.

306 Wang, *Li Hongzhang and the Beiyang Fleet*, p. 81.

307 Ibid., pp. 81-82.

308 Arlington's comments on the training standard of the Nanyang Fleet, see Rawlinson, *China's Struggle for Naval Development*, p. 123.

and the Nanyang Fleet was only in appearance. They were equipped with steamships, but the operational doctrine remained largely the same as the traditional *water forces*'.

In contrast to the Fuzhou Navy Yard Fleet and the Nanyang Fleet, the Beiyang Fleet suffered less adverse influences of the traditional *water forces*, and its modernisation was more comprehensive. This was mainly due to two largely fortuitous reasons.

First, the Beiyang Fleet enjoyed a stronger leadership. The Fuzhou Navy Yard witnessed ten consecutive commissioners between its establishment in 1867 and the outbreak of the First Sino-Japanese War in 1894. The Nanyang Fleet was patronised by five consecutive Nanyang Superintendents between 1875, when it was established, and the outbreak of the First Sino-Japanese War in 1894. In contrast, Li Hongzhang held the office of Northern Superintendent and governor-general of Zhili province (which gave him the authority over the Beiyang Fleet) from 1875 to 1894, and his power and prestige were on the rise during this period. Li's power ensured that his Beiyang Fleet was kept away from the influence of the traditional military.

Second, the Beiyang Fleet's modernisation had a later start than the steam fleets in the south, i.e. the Fuzhou Navy Yard Fleet and the Nanyang Fleet. Unlike the Fuzhou Navy Yard Fleet and the Nanyang Fleet, which had their own shipbuilding capabilities to support regional naval modernisation, the Beiyang Fleet had no shipbuilding plant to rely on (Li's Tianjin Arsenal had very low shipbuilding capabilities). The boom of the Beiyang Fleet therefore started only in the late 1870s when purchasing from abroad replaced shipbuilding at home to become the main source of ships for the Chinese steam navy. Before the boom, the Beiyang Fleet was much smaller than the steam fleets in the south, and consequently there was very little need to transfer senior officers from the old *water forces.* When the Beiyang Fleet's need for naval professionals rose in the late 1870s and early 1880s, the professionally-trained native Chinese naval officers had finished their education and were ready to take on their responsibilities (the first group of naval officers sent to England returned in

1879).[309] Perhaps in order to prevent the infiltration of men from the *water forces*, and thereby to prevent their adverse influence on the Beiyang Fleet, the 1888 Beiyang Fleet Regulation clearly stipulated that only naval academy graduates were eligible to join the fleet as officers.[310]

These two factors enabled the Beiyang Fleet to remain unaffected by the traditional *water forces*. Without the influence of the latter, the Beiyang Fleet had managed to become a modern fleet in terms of both equipment and doctrine; whereas the modernisation of the other two fleets took place only on the facade of equipment, and the doctrine remained largely the same as that of the traditional *water forces*. However, a closer look at the two factors by which the Beiyang Fleet was kept away from the adverse influences of the traditional *water forces* reveals that they were largely 'accidental'. Had the leadership of the Beiyang Fleet been not strong enough to resist the infiltration of traditional *water forces*, or had the development of the Beiyang Fleet started before the first group of professionally trained officers was ready to take duties aboard, the Beiyang Fleet would have suffered the same degree of influence from the traditional *water forces* as the Fuzhou Navy Yard Fleet and the Nanyang Fleet.

On the other hand, the infiltration of the traditional *water forces* into the Nanyang Fleet and the Fuzhou Navy Yard Fleet was a less 'accidental' result. Since China lacked both strong seafaring communities and modern science and technology, it was necessary to hire those who had worked aboard foreign vessels to man the Chinese steamships. But because most of these men were members of the south-eastern Asian Chinese diaspora, they were considered not 'Chinese' enough and lacked military quality, which instigated the transfer of senior officers from the *water forces*. Those senior officers transmitted to the steam fleets a doctrine that was not suitable for sea fighting in the modern age. The performances of the Nanyang Fleet and the Fuzhou Navy Yard Fleet in the Sino-French War proved this point.[311]

309 YWYD, Vol. 2, pp. 412-414.
310 QMHJSL, pp. 482-484.
311 Rawlinson, *China's Struggle for Naval Development*, pp. 122-124.

***

Concerning professionally-educated native naval officers, a particularly noteworthy phenomenon is that a considerable number came from Fujian province.[312] In the Battle of Yalu, officers of Fujianese origin commanded eight of the ten Chinese ships that engaged the Japanese Combined Fleet. It remains difficult to ascertain the exact number of Fujianese officers in the late 19th century Chinese steam navy, as the four regional fleets operated independently from each other. Nevertheless, a census conducted in the Republican Era (1912-1949) offers a rough indicator of the number of Fujianese officers in the Qing Empire's steam navy, as the Republican navy inherited the officer corps of the Qing navy. A 1937 headcount of the Republican navy reveals that 2,139 out of 2,563 naval officers, and 187 out of 234 officers at Headquarters, were of Fujianese origin.[313] Evidently, Fujianese officers comprised the majority of the officer body of the Qing steam navy, especially of the Beiyang Fleet – the navy's most powerful unit.

The reason for the large number of Fujianese in the Chinese steam navy of the Qing Dynasty is twofold. A direct reason, as mentioned earlier in this chapter, is that the Fuzhou Naval Academy was considered the best among the various naval academies and had the largest number of graduates. An indirect but fundamental reason is that Fujian province had some geo-economic particularities that made its people more willing to become naval officers. A review of Chinese agriculture history shows that Fujian province had a very low amount of arable land vis-à-vis other provinces of China proper.[314] At the same time, Fujian province was a seaboard province isolated from the Lower Yangtze Plain by the Wuyi Mountains. Though weaker in agriculture, Fujian province had stronger maritime traditions that traced back to the Tang Dynasty (AD 618-907) when Quanzhou Port in south-eastern Fujian province was one of the busiest hubs of seaborne trade in East Asia. Consequently, the Fujianese people had a

312 Fujian province is a seaboard province located in south-eastern China. Its provincial capital is Fuzhou.
313 Zunpeng Bao, *清季海军教育史 Qingji Haijun Jiaoyushi [History of Naval Education in the late Qing]*, (Taibei: Guofang Yanjiuyuan, 1969), p. 133.
314 Ge et al., 'Change of Cultivated Land and Driving Forces Analysis of Some Provinces of China in Past 300 Years', pp. 825-832.

higher potential to become seamen vis-à-vis those from the other provinces of China.

Also, the geographical isolation of the province resulted in a strong regional identity that to an extent alienated the Fujianese people from the rest of China. An anecdote that illustrates this point is that of the first group of young naval officers who completed their studies in England and returned to China. When they were summoned to see senior imperial officials in Beijing, despite their proficient English, these young Fujianese naval officers had difficulties talking in Mandarin Chinese and required an interpreter to translate their Fujianese dialect into Mandarin, the *lingua franca* of the Qing Dynasty China.[315]

Warship	Captain	Chief Officer	Chief Engineer
Ding Yuan	Liu Buchan (Fujian)	Li Dingxin (Fujian)	Yu Zhenshun (Fujian)
Zhen Yuan	Lin Taizeng (Fujian)	Yang Yonglin (Fujian)	Lu Linjie (Fujian)
Zhi Yuan	Deng Shichang (Guangdong)	Chen Jinkui (Guangdong)	Liu Yinglin (Guangdong)
Ji Yuan	Fang Boqian (Fujian)	Shen Shouchang (Fujian)	Liang Zuquan (Fujian)
Jing Yuan	Ye Zukui (Fujian)	Liu Guanxiong (Fujian)	Lin Dengliang (N/A)
Jīng Yuan	Lin Yongsheng (Fujian)	Chen Ce (Guangdong)	Sun Jiang (N/A)
Lai Yuan	Qiu Baoren (Fujian)	Chen Wenbin (Fujian)	Chen Jingqi (N/A)
Ping Yuan	Li He (Guangdong)	N/A	N/A
Chao Yong	Huang Jianxun (Fujian)	Weng Shouyu (Fujian)	Li Xingqiao (N/A)
Yang Wei	Lin Lvzhong (Fujian)	Chen Wenchao (Fujian)	Chen Xueshu (N/A)

Table 4.3 Capital Ships of the Beiyang Fleets and Commanders before the First Sino-Japanese War[316]

In the Chinese steam navy, a 'Fujianese clan' – as many historians coined the term – began to take shape in the early stages of naval education. As mentioned earlier in this chapter, due to the traditional educational system's hostility towards *Western learning*, the various Chinese naval academies were confronted

315 QMHJSL, p. 606.
316 Wang, *Li Hongzhang and the Beiyang Fleet*, p. 327.

with a severe shortage of recruits. Becoming a naval officer was regarded as an unorthodox choice for Chinese students from other provinces, but considered less so by the youths of Fujian province. They actively signed up for the Fuzhou Naval Academy, and many even travelled far to join the naval academies of other provinces when that of Fuzhou was full.[317] The memoir of a Republican naval officer who joined the Tianjin Naval Academy in the late 1890s revealed that it had been commonplace that Fujianese cadets made up seventy to eighty per cent of the student body of all Chinese naval academies.[318] As no native Chinese had received systematic training to become naval officers before the opening of the naval academies, the overwhelming Fujianese graduates became the only professionals available for the Chinese steam navy. As can be seen in Table 4.3, Fujianese officers monopolised almost all of the key positions on the capital ships of the Beiyang Fleet.

Fujianese naval cadets not only made up the majority in all naval academies, a substantial segment of the young officers who had received advanced naval education abroad were also Fujianese. As previously mentioned, Chinese indigenous naval education was inadequate, offering courses only in basic navigation skills and leaving the gap between being able to sail single steamships and being able to command battles at sea unaddressed. In the last few decades of the 19th century, many Western navies established institutions dedicated to the study of naval tactics. Japan, in the hands of whom the Chinese steam navy suffered a catastrophic defeat in 1894, also established the Higher Training School for Naval Officers (later renamed as Naval Staff College) in 1888. China, on the contrary, refused to do so, as it was regarded as too unorthodox.[319] Instead of developing a degree of indigenous advanced naval education, the Self-Strengtheners sent a number of elite young officers abroad for such an education. An overwhelming majority of them were Fujianese.

Due to financial constraints, among the entire officer corps of the Chinese steam navy, only a small number of officers received advanced professional education abroad. They were overwhelmingly Fujianese, and they were aware that they were irreplaceable. This gave rise to the problem of corruption. It is

317 QMHJSL, p. 606.
318 QMHJSL, p. 605.
319 Evans and Peattie, *Kaigun*, p. 13.

particularly noteworthy that all of the twelve elite officers who had studied in England in the first naval educational mission were Fujianese. Upon returning to China, they were given key command positions in the Beiyang Fleet and they held those positions until the fleet was wiped out in 1895. Some of these young officers, however, were opportunists who saw joining the navy as a shortcut to wealth and power. In a personal letter that Li Hongzhang sent to an acquaintance, he mentioned that some of those officers, aware of their own importance, vowed that '[China's] *creation of an ironclad navy would make us rich and powerful. We should form an alliance among ourselves in pursuit of power and wealth. If the rank and salary given to us is not satisfactory* [upon our returning to China]*, we shall boycott.'*[320]

Zeng Jize (Chinese minister to Britain, in office 1879-1886) reminded Li Hongzhang that the origins of students sent to England should be diversified.[321] But given the Fujianese dominance of cadets in naval academies throughout China, the two later groups of cadets sent to England remained overwhelmingly Fujianese. With the benefit of hindsight and subsequent evidence, we know that some of these officers indeed were corrupt. Fang Boqian, who later became commander of the German-built protected cruiser *Ji Yuan,* was suspiciously rich. In his diary he noted that he had a number of properties in various locations and two concubines.[322] In the Battle of Yalu he fled with his ship in the midst of the action and was later executed for desertion.[323] John O. P. Bland, who served in the Chinese Imperial Maritime Customs from 1883 to 1896, declared some of the Fujianese officers of the Beiyang Fleet, in particular Liu Buchan, Lin Taizeng and Fang Boqian, worked the fleet '*as a commercial undertaking for their own benefit.'*[324]

In order to defend vested interests, these officers became very inactive with regards to rotations. Many of them tended to hold on to their positions as ship commanders, positions that brought them real power. A comparative study between Liu Buchan, key commander of the Beiyang Fleet and his Japanese counterpart Tōgō Heihachirō, shows that in the sixteen years between Liu's

320 LWZGQJ-PLHG, Vol. 22, entry of 22nd day 7th Month 7th Year of Guangxu Reign.
321 LWZGQJ-PLHG, Vol. 18, p. 33.
322 Jiang, *Dragon Flags over the Navy*, p. 209.
323 Biggerstaff, *The Earliest Modern Government Schools in China*, p. 249.
324 Ibid., 250. Also see ZGYJ, p. 880.

graduation from England and China's defeat in 1894, Liu commanded only two ships – the Rendel gunboat *Zhen Bei* and ironclad battleship *Ding Yuan*. In contrast, Tōgō had served aboard seven different warships and worked in various naval institutions ashore.[325] This would certainly make Tōgō a more experienced naval commander than Liu. Other Chinese senior naval officers also showed an inclination to cling on to their positions as ship commanders. The commanders of the ten capital ships of the Beiyang Fleet never changed from the ships entering commission until they were sunk or captured in the war with Japan, narrowing their vision as senior naval officers.[326]

These senior officers were also in charge of the day-to-day training of the Beiyang Fleet. As has been mentioned earlier in this chapter, some of them were sent abroad in the hope that they could become experts in naval tactics and fleet manoeuvring, but the overseas trainings did not equip them with such expertise. But it seems that the top echelon of the empire was unaware of their inadequacy as senior naval officers. Even if the top echelon was aware, there would be little they could have done because, after all, they were the most highly trained officers in China. The training of the Beiyang Fleet under the charge of these Fujianese officers was adequate in appearance only. Some confessed after the war with Japan that in many day-to-day gunnery trainings the distance to target was already known to the gunners.[327] Training on tactical formations was also fraught with cheating and formalism.[328] Adm. Edmund R. Fremantle, who had been the commander-in-chief of the China Station between 1892 and 1895, was invited to visit the Beiyang Fleet before the war with the Japanese and he commented to his English colleague after the visit that '[the Beiyang Fleet] *seems in very fair order, but they steam at very low speed, and there is too much show.*[329]

More worryingly, the Fujianese officers showed a dangerous tendency to become factionalised among themselves and challenged the authority of Ding Ruchang, the commander-in-chief of the Beiyang Fleet. Ding was not a

---

325 Yau-Woon Ma, *靖海澄疆 - 中国近代海军史事新诠 Jinghai Chengjiang: Zhongguo Jindai Haijun Shishi Xinquan [A New Examination of the History of Modern Chinese Navies]*, (Beijing: Zhonghua Shuju, 2013), pp. 55-59.
326 Ibid., 61.
327 Jiang, *Dragon Flags over the Navy*, p. 295.
328 Ibid.
329 Fremantle, *The Navy as I Have Known It*, p. 422.

professional naval officer; he was originally a cavalry officer of Li Hongzhang's Huai Army. It was said that one of the key reasons Li made him the commander-in-chief of the Beiyang Fleet was to counterbalance the Fujianese clan. But as a non-professional, Ding's authority stood on shaky foundations.[330] As Adm. Fremantle observed when he visited the fleet: '[Admiral Ding] *spoke no English, which was a great drawback, as all the signals and semaphores* [of the Beiyang Fleet] *were in English, which his captain, Commodore Lew Poochin* [Liu Buchan] *spoke fluently; so that he was much in the latter's hands.*' [331]

William F. Tyler's memoir supports this view.[332] He noted that on the eve of the Battle of Yalu '*Admiral Ding held a council of war and it was decided to fight in line ahead of sections – a section being mostly two sister ships in quarter line.'*[333] But when the Japanese were in sight, Liu changed the formation of the fleet, '*the signal was for Line Abreast with leaders* [the flag ship which Liu commanded] *in the middle instead of Line Ahead of Sections, as had been decided by the Admiral in the consultation with his captains*.'[334] The reason why Liu made this change was, according to Tyler, that *'with the battleships in the centre and the weakest vessels on the wings, the enemy would give the latter first attention'* so that '*it would avoid the immediate concentrating fire on his* [Liu's] *ship that would result from Line Ahead*'.[335] It remains difficult to ascertain to what extent this was true, but *The Draft History of Qing*, the official history of the Qing Dynasty echoed this view to an extent: '[Admiral Ding Ruchang] *was originally an army officer; besides, he was from Anhui province* [rather than Fujian]. *He presided alone over and was checked by the Fujianese clan. He was not able to exercise his authority.'*[336]

***

It is also noteworthy that there was a strong presence of foreign officers in the Beiyang Fleet. In 1889, thirty-four Westerners appeared on the roster of the

330 QMHJSL, pp. 604-606
331 Fremantle, *The Navy as I Have Known It*, p. 422.
332 William F. Tyler took part in the Battle of Yalu aboard the ironclad battleship *Ding Yuan*, the flagship of the Beiyang Fleet.
333 William Ferdinand Tyler, *Pulling Strings in China*, (London: Constable & Co. Ltd., 1929), p. 44.
334 Ibid., 48.
335 Ibid., 49.
336 QSG-LZ, No. 249.

Beiyang Fleet, and in 1890, the number was twenty-nine.[337] The reliance on foreign talent was so strong that eight of them participated directly in the Battle of Yalu and the Battle of Weihaiwei.[338] The Beiyang Fleet's reliance on foreign officers is also reflected in the fact that the fleet's operational orders were given in English rather than Chinese, and junior and petty officers at the lower end of the chain of command possessed a basic command of English.[339] This suggests that foreign officers may have played a considerable role in the day-to-day training of the fleet. Li Hongzhang argued that the large-scale employment of foreign officers was a necessity because *'the ships and guns were advancing almost on a daily basis, its theories and techniques were characterised by profundities that were unfamiliar to Chinese. … It is therefore a necessity to borrow talent from foreign countries by recruiting foreigners to come to teach in China.* [Only] *in this way the effective use of the naval assets can be expected.'*[340]

As this extract implies, the Chinese officers were not capable of running a steam navy on their own. This was, in turn, because the Chinese authorities were unwilling to promote meaningful institutional changes that could enable the Chinese steam navy to attain self-standing. The Imperial Japanese Navy offered an opposite example: the navy not only learned attentively from foreign officers, but also restructured its naval institutions after Western navies. In the early stages of its development, the Japanese navy also hired a considerable number of foreign officers. Among them were Lt. Comdr. Archibald Douglas, Lt. Comdr. L.P. Willan and Capt. John Ingles. Lt. Comdr. Douglas and his mission established British traditions within the Japanese Navy, from matters of seamanship to the style of uniform and the attitudes to its officers.[341] Lt. Comdr. Willan was hired to teach gunnery and navigation at the Japanese Naval Academy, and introduced the study of modern naval tactics to the infant Imperial Japanese Navy.[342] Capt. Ingles' arrival in Japan coincided with the establishment of the Japanese Naval Staff College, and he was appointed both as an instructor in the college and as an advisor in the general modernisation of the Imperial Japanese navy. The

337 Jiang, *Dragon Flags over the Navy*, pp. 298-299.
338 Wang, *Li Hongzhang and the Beiyang Fleet*, pp. 330-331.
339 ZGYJ, p. 877, 880.
340 LWZGQJ-ZG, Vol. 57, p. 18.
341 Evans and Peattie, *Kaigun*, p. 12.
342 Ibid.

Japanese not only learnt about modern naval tactics, but also adopted Ingles' suggestions on streamlining the naval institutions.[343] Based upon the acquired knowledge and the reformed institutions, the Imperial Japanese Navy achieved self-standing.

In contrast to Japan, foreign officers were not allowed to play a crucial role in the Qing Empire's military. China was eager to acquire Western firepower, but at the same time, the nation paradoxically tried to avoid wholesale Westernisation. Wright observed that in Qing Dynasty China '*foreigners were accepted as technical specialists, but they could not possibly perform the political, social, and ideological roles that were a prerequisite to effective military leadership*'.[344] Even the most enthusiastic Self-Strengtheners believed that China was superior to the West in all aspects but weaponry. Foreign officers were employed only to pass on their skills to the Chinese officers, and were not allowed to change the Chinese institutions or to become an organic part of it. In the eyes of the Self-Strengtheners, no skill the foreigners could offer was worth even only the slightest concession of sovereignty.

This mind-set in dealing with foreign officers had a twofold consequence on the development of Chinese naval power. First, it adversely affected the quality of military aids that China received. Driven by the suspicion of foreign advisors, Chinese officials distinguished two types of military aids: those controlled by Chinese government and those controlled by foreign governments.[345] The latter was usually considered as a form of intervention and therefore refused. Instead of accessing foreign military talents through government-to-government channels, the Self-Strengtheners preferred to access foreign military aid via personal connections. This approach was an effort to reduce the intervention of foreign governments, but it could hardly guarantee the qualifications of foreign advisors hired via personal nexus.

Inspector-general (*Zong Cha*) was the highest position created for foreign advisors in the Beiyang Fleet.[346] As shown in Table 4.4, all five

---

343 Evans and Peattie, *Kaigun*, p. 13.
344 Wright, *The Last Stand of Chinese Conservatism*, p. 203.
345 Ibid., 214.
346 The duty of inspector-general remained intentionally vague. The 1888 Beiyang Fleet Regulation did not institutionalise this position. William Tyler pointed out in his memoir that the position of inspector-general '*in vague Chinese form which might mean anything from second-in-command to advisor with rank of admiral.*'

inspectors-general of the Beiyang Fleet came via personal connections. A closer examination of their backgrounds shows that most of them possessed no adequate naval qualifications. Clayson was a merchantman captain, while Siebelin held office only for a short period and his military qualifications are unclear. Von Hanneken was a former German army officer, while McClure, appointed as inspector-general of the Beiyang Fleet on the eve of the Battle of Weihaiwei, was a '*skipper of a local tug-boat, and little more if nothing less*'.[347] Only Lang (see Photo 4.3) was a real naval professional, but he was unable to make a significant contribution to China's naval modernisation due to the reason that will be discussed in detail in the next passage.

Name	**Nationality**	**Time of Service**	
William H. Clayson	British	Sept 1880 - ?	Recommended by Robert Hart (Inspector General of China's Imperial Maritime Custom Service)
William M. Lang	British	March 1883 - Aug. 1884	Recommended by Robert Hart
Siebelin	German	Oct. 1884.10-?	Recommended by Li Fengpao (Chinese chargé d'affaires to Germany)
William M. Lang	British	May 1886 -1890	-
Constantin von Hanneken	German	Aug. 1894 - ?	Recommended by Li Hongzhang (Von Hanneken was son-in-law of G. Detring, the then Inspector of Tianjin Imperial Maritime Custom Services)
John McClure	British	Nov.1894 - Feb. 1895	Persona grata with the Detring family[348]

Table 4.4 Inspectors-General of the Beiyang Fleet[349]

Second, the authority of foreign advisors was rather confined, which in turn made it hard for them to improve the Chinese steam navy. As to the position of foreign advisors in the Chinese military, a foreign observer noted: '*they were outsiders from the Chinese official point of view, but had to be tolerated because*

Rawlinson, *China's Struggle for Naval Development*, p. 164.

347 Tyler, *Pulling Strings in China*, p. 60.

348 Ibid.

349 Qizhang Qi, *北洋舰队 Beiyang Jiandui [The Beiyang Fleet]*, (Jinan: Shandong People's Press, 1981), p. 46.

the exigencies of coast defence demanded the navy.'[350] They were essentially hired to teach, but without authority, their impact could not be guaranteed. This point can be illustrated with the story of Capt. Lang, the only fully-qualified naval professional among all the five inspectors-general that the Beiyang Fleet hired. He was acclaimed as an outstanding naval officer by both Chinese and foreign observers and he was very devoted to his duty. Lang strived to regulate the training of the Beiyang Fleet in British fashion and to establish a protocol system in the fleet after international practice.[351]

During his five-year stay in China, particularly the second term from mid-1886 to 1890, there were noticeable improvements in the training standard of the Beiyang Fleet. British Admiral George A. Ballard commented that the fleet under Lang's charge was in 'serviceable condition', with 'excellent discipline' and 'sound training', and stores and equipment 'up to establishment' both ashore and afloat. Externally, the ships were 'smart and clean', and internally, in 'good working order'. Constant cruising had kept the crews alert. In all respects, he recalled, 'the fleet represented a force to be reckoned with at its face value.'[352]

However, the progress was interrupted by Capt. Lang's resignation. Within the fleet, Lang's relations with his Chinese subordinates, especially the Fujianese officers, were strained due to his strict character as a disciplinarian. During one of the cruises of the fleet in 1890, the ships called at Hong Kong and Adm. Ding Ruchang left his flagship for a detour to the island. Lang flew his own admiral pennant citing he had appointment from the Imperial Court as admiral.[353] But Liu Buchan, a leading figure of the 'Fujianese clan' disagreed and had Lang's flag hauled down.[354] Lang felt offended and wrote a complaint to Li Hongzhang, but Li upheld Liu when the dispute was brought to his attention.[355] Angrily, Lang resigned and returned to England. Lang had taken his commission seriously, which failed to be reciprocated by Chinese officials. The rank of admiral given to Lang was mostly used as a lure; there was no real power attached to it. It was

---

350 Rawlinson, *China's Struggle for Naval Development*, p. 166.
351 Qi, *The Beiyang Fleet*, p. 209. Rawlinson, *China's Struggle for Naval Development*, p. 164. Wang, *Collected Essays on the History of Modern Chinese Navy*, p. 73.
352 Rawlinson, *China's Struggle for Naval Development*, p. 163.
353 Lang himself and the British Government took the commission seriously. In a letter sent by Sir N. R. O'Connor to London, he said: '[Lang] *considers satisfactory his brevet rank is that of admiral, and he has actual command as vice admiral*.' see ADM1/6827.
354 Ibid., 164-165.
355 Rawlinson, *China's Struggle for Naval Development*, p. 164.

observed that the training of the Beiyang Fleet went into a decline after Lang's departure, which is commonly recognised as a major reason for the fleet's defeat.[356]

4.5 Conclusion

Becoming a naval officer was not a popular choice among youngsters of the Qing Dynasty China. Learning Confucian classics and attending Imperial Examinations was the only recognised path of upward mobility; *Western learning*, on the contrary, was looked down on by most of the Chinese elites. It was observed that men of talent and integrity usually 'steered clear' of such undertakings, whereas only 'lesser characters were willing to associate with the modernisation projects'.[357] To tackle the resulting shortage of recruitment, the Chinese naval academies offered incentives to attract students, which further exacerbated the society's bias against modernisation. Indeed, a considerable number of students who joined the *Western learning* schools – naval academies included – were either opportunists who saw the steam navy as a shortcut to wealth and power, or those had little hope of passing the Imperial Examinations. Yan Fu was an example of the latter. In short, the strong social prejudice against *Western learning* had a deleterious impact on the quality of the recruits of naval academies.

Within the naval academies, the study of Chinese classics took up a substantial amount of time, which could have been used for military training. More worryingly, these classics conveyed an ideology at odds with that of maritime societies, and stressed literary and humanistic accomplishment at the expense of science and technology. Motivated by provincialism, the various regional maritime defence agencies established their own naval academies. All of these academies were moulded after the Fuzhou Naval Academy, where the training was only limited to the sailing of individual steamships. Due to financial difficulties and a lack of inter-provincial cooperation, few of the later-established

[356] Rawlinson, *China's Struggle for Naval Development*, p. 165.
[357] Hsü, *The Rise of Modern China*, p. 289.

naval academies attained a standard comparable to that of Fuzhou. The achievement of Chinese indigenous naval education remained low. To make the steamships an effective fighting force, a number of young officers were sent to Europe in pursuit of advanced naval education. China's reliance on Europe for advanced naval education was structural, as the naval modernisers did not want to reform the traditional institutions to improve naval education. The results of the naval educational missions abroad, however, were not ideal.

The senior commanding officers of the steam navy were of three backgrounds: those transferred from traditional *water forces*, those professionally educated by naval academies, and foreign officers. The first group dominated the southern fleets, i.e. the Nanyang Fleet, the Fuzhou Navy Yard Fleet and the Guangdong Fleet. As Qing China's economy had no strong elements of seaborne trade, the traditional *water forces* were little more than a littoral and riverine constabulary force rather than a seagoing navy. Therefore most of the senior officers who transferred from the *water forces* lacked the professionalism required to command a steam fleet. They introduced to the new fleets a doctrine that conformed to *water forces* rather than modern warships. Professionally educated officers and foreign officers played a major role in the elite Beiyang Fleet. Most of the professionally-trained officers were from Fujian province – a province characterised by strong maritime traditions, but rather isolated from the other inland provinces. Their qualifications were higher that those of old *water forces* (in fact their capabilities as commanding officers were questionable), but the gain was offset by their tendency to factionalise among themselves and to put their personal interests ahead of the nation's. The last group – foreign officers – were given no real power and their contribution was rather limited. Motivated by a Sino-centric mentality and suspicion of foreigners, the Self-Strengtheners refused to give foreign officers sufficient authority to make any substantial contribution to China's naval modernisation. Capt. Lang's story exemplifies this point. Overall, the quality of the senior commanding officers of the Chinese steam navy remained low.

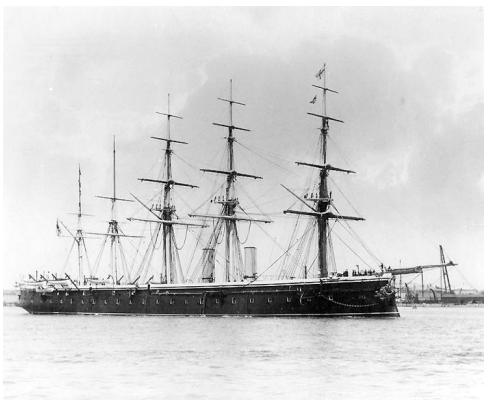
List of the Chinese Officers presented for admission into the Royal Naval College at Greenwich [England] by the Directors of the Chinese Mission.

Names.	Age.	Time in the Naval School at the Imperial Arsenal Foochow.	Time on board the Training Vessel.	Time of active service in the Chinese Imperial Navy.	Time spent in England.	Rank in the Chinese Heirarchy	Remarks made on the merits of the Officers by the Captains in Command of the Training Ship
	years.	years.	years.	Remained as navigating officer of the Training Vessel			From.
Yen Tsing Kwang	23.	5.	6.		From May 1877	An officer of the 5th rank.	Captain Tracy R.N.[2] "Very clever officer and Navigator."
Fang Peh Kien	24.	4.	5.	Two years as 1st Lieutenant	—"—[1]	—"—	Captain Luxm[o]ore R.N. C. B.[3] "Very excellent navigator and Seaman, and very steady officer."
Ho Sin Chuan	24.	4.	4.	Three years as 1st Lieutenant	—"—	—"—	Captain Tracy R.N. – "Very clever officer and Navigator."
Lin Yung Sing	24.	4.	5.	Two years as 1st Lieutenant	—"—	—"—	Captain Luxm[o]ore R.N. C. B. "Very good gunnery officer and seaman, and a good officer of the watch – very zealous."
Yeh Choo Kwee	24.	4.	5.	Two years as 1st Lieutenant	—"—	—"—	Captain Luxm[o]ore R.N. C. B. – "A good steady officer and navigator."
Sah Ching Ping	17.	3½.	4.	One year as 2nd Lieutenant	—"—	—"—	Captain Luxm[o]ore R.N. C. B. – A good navigator and officer but nervous in carrying on duty."
Wang Kien Choon	24.	4.	5.	Two years as Lieutenant	—"—	—"—	Captain Luxmore R.N. C. B. – "Good navigator, and a very steady young officer."
Kiang Maw Tze	21.	3.	4.	Two years as Lieutenant	—"—	—"—	Captain Tracy R.N. – "Good Navigator and officer."
Ling Yeng Khe	26.	3.	4.	Two years as Lieutenant	—"—	—"—	Captain Luxmore R.N. C. B. "Very good, intelligent, zealous, and a promising officer in every way.

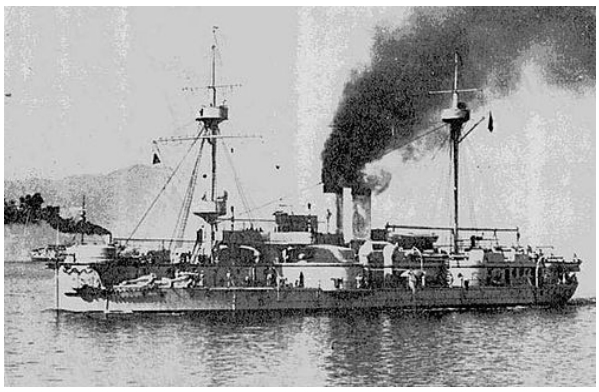
The Educational knowledge of the above mentioned officers embraces the following subjects. —	
Arithmetic, algebra – progressing to the higher order of equations, Arith[metic] & Geom[etric] Prog[ression], Ratio variation & Proportion &c—[4]	
Geometry – First 3 books, parts of 4th and 6th, with definitions of the 5th book (Euclid's Elements.)	20th August 1877
Navigation & Naut[ical] Astronomy (practical and theoretical) use of instruments – especial proficiency having been acquired	(s[igne]d) Prosper Guiquet
in the use of the Sextant; Plane and Spherical Trigonometry (theoretical and practical); English Composition, &c—	one of the Directors
Elementary Statics; and a limited knowledge of physics – Chart making, &c &c—	of the Chinese Mission
N.B.[5] By the 1st of October, the officers will be proficient in the 4th and 6th books of Euclid; in elementary	
Statics and Dynamics; and will have read an elementary treatise on Physics —	

Transcription notes:
1) the " sign in two of the columns denotes 'ditto', meaning "the same as above"
2) Reviewing officer Captain Tracy was designated as Royal Navy (R.N.)
3) Reviewing officer Captain Luxmore, in addition to being Royal Navy (R.N.) was also a Companion of the Order of the Bath (C.B.), a ceremonial British knighthood.
4) &c is short for Latin "et cetera" meaning "and so on"
5) N.B. is Latin for Nota Bene, literally "note well", or "pay attention"

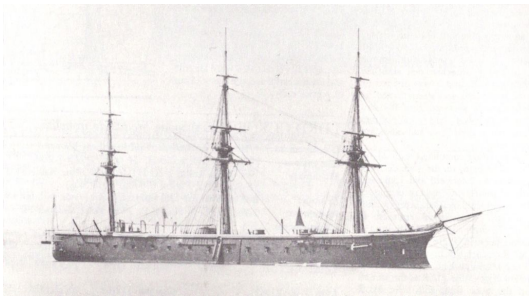
Photo 4.1 Reference letter presented to the British Admiralty by the directors of the first Naval Educational Mission (transcript from ADM 1/6423, National Archives). Two points can be drawn from this letter: (1) a comparison between the qualifications of the Chinese students and the curriculum of the Royal Navy College at Greenwich shows that the courses they took in England were little more than a repetition of what they had already learnt in the Fuzhou Naval Academy. The gap between being able to sail single steamships and being able to command battles at sea remained unbridged. (2) They boarded the British navy ships as officers rather than midshipmen (in contrast, most of the Japanese naval cadets joined as midshipmen); this was probably the reason why the cadets like Ye Zukui were not allowed to perform duties when they were aboard British warships.



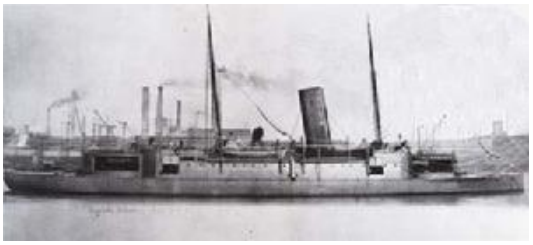
(HMS Minotaur)



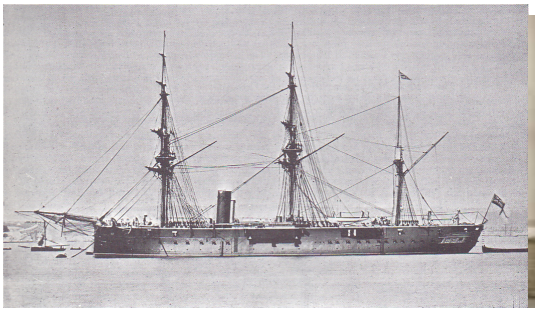
(Ding Yuan)



(HMS Bellerophon)



(Chao Yong)



(HMS Invincible)

(Jing Yuan)

Photo 4.2 of the British Royal Navy ships aboard which the first group of Chinese cadets served when they were in England, and the Chinese steam navy ships they later commanded. Note the differences in the design of the ships.

Photo 4.3 Capt. William M. Lang (second row in Western-style uniform) and Liu Buchan (second row left to Lang). Upon a disagreement between the two in 1890, the former resigned and returned to England. Lang's relation with the Fujianese senior commanding officers in the Beiyang Fleet was strained. He once commented that the Fujianese senior officers were '*ignorant and envious men*'.[358] The training standard of the Beiyang Fleet declined after Lang's resignation. The inadequate training was generally considered to be a key reason for the fleet's defeat in the First Sino-Japanese War. (Source: Wright, *The Chinese Steam Navy*, p. 30.)

[358] Stanley F. Wright, *Hart and the Chinese Customs*, (Belfast: WM. Mullan & Son, 1950), p. 481.

Chapter Five

The Ships of the Chinese Steam Navy

This chapter will focus on three aspects: (1) the various types of home-built ships; (2) the decline of indigenous shipbuilding capabilities; and (3) naval acquisition from abroad. It will try to explain the relationship linking the elements of the Qing Empire's 'fundamental structure' to the development of the ships of the steam navy. This is crucial because '*warships are built to meet specific requirements, which can most simply be stated as a national strategy. … it is well worth considering why the powers built warships, and how they chose from the myriad of designs that were available after 1860. National strategy … dominated those decisions.*'[359] In an era of continuous technological changes, with the transition from sail to steam, the cost to build warships increased exponentially. As a result, the quantity and quality of ships that a nation state could afford was directly related to the financial and industrial resources that it could mobilise. In turn, a clear set of strategic objectives identifying naval missions was essential for striking a balance between the shape and size of a fleet and the resources required to develop it.

5.1 The Various Types of Home-Built Ships

This section will examine the divergent opinions among the Self-Strengtheners

[359] Andrew Lambert, 'Introduction' in *Steam, Steel and Shellfire: The Steam Warship, 1815-1905*, Robert Gardiner ed., (London: Conway Maritime Pres Ltd, 1992), p. 9.

as to what type of ship best suited China's maritime defence. There were three divergent strands of thinking: the school of 'dual-purpose ships', the school of ocean-going warships and the school of littoral/riverine gunboats. Those who were concerned with financial survivability proposed the 'dual-purpose ships'. They argued that warships should be able to sustain themselves by serving as cargo ships in peacetime. Those who proposed ocean-going warships were mostly admirers of Western naval power. From a purely military point of view, they suggested that China should build larger and mightier warships because such ship could better defend the country against foreign aggression. Those who advocated littoral/riverine gunboats were mostly men emerged from the traditional *water forces*. They wanted to build a type of ship that was suitable for the Chinese traditional pattern of maritime warfare.

While all strands of arguments were mainly concerned with naval modernisation, each one of the three had its particular reasons, advantages and disadvantages. Had their ideas been debated, openly discussed and centrally coordinated, the result might have been a more balanced navy. But a debate that would have allowed a strategically informed choice never really took place. This was partly due to a lack of an authoritative decision-making body and a clear strategy in the central government, and partly because the maritime defence districts were reluctant to coordinate with each other horizontally. The Imperial Court revolved around the emperor, who had very limited interests and time to dedicate to the navy. The top echelon rarely gave clearly stated instructions on how the steam navy should be built. When they did, they tended to use vague terms such as 'effective' and 'suitable'. The local practitioners were left to do what they believed was right. At the same time, the maritime defence of the Qing Empire and its finances were largely organised provincially. This meant that shipbuilding projects were to be carried out on a regional basis without centralised or inter-regional coordination. Under this premise, different Self-Strengtheners were motivated to build ships for different reasons.

The *'dual-purpose ships'*

The Fuzhou Navy Yard was the largest shipbuilding centre. It had an ambitious long-term shipbuilding plan. The ambition required the navy yard to take financial balance as its paramount concern. Zuo Zongtang, founding father of the Fuzhou Navy Yard, envisaged that the Fuzhou-built warships could earn their keep by carrying government tribute grain or other types of cargo, so that the new steam navy would not incur new expenses to the government. In an 1866 memorial to the Throne, Zuo blueprinted:

> '*the steamships built could be used to transport grains, and be paid at the same rate of* [flat bottom junk cargo boat], *when the* [transportation of tribute grains] *is accomplished, they can be hired as merchant ships, and make profits* [by serving at merchantmen]. [The profits made can be] *used for maintaining and building* [more ships]. *When alarm is raised in coastal areas,* [the ships should] *be re-assembled under military command and sent to the place where the enemy is spotted*' [360]

This mind-set had far-reaching impacts on the ships built in the Fuzhou Navy Yard. The yard intended to build two types of ships when it was established: a type of large vessel of 1260-ton displacement and 150-horsepower, and a type of small vessel of 500-ton displacement and 80-horsepower. In the contract that Zuo signed with Frenchmen Prosper Giquel, head advisor of the navy yard, he explicitly provided that the large vessels built in Fuzhou should have a cargo capacity of 10,000 *shi* of rice.[361]

Nevertheless, maintaining a steam navy was still too heavy a burden for the Fuzhou Navy Yard to shoulder. As more and more ships were launched, the maintenance expenses skyrocketed and the Navy Yard was forced to dip into the funds that it had previously accumulated. In 1871, two years after the navy yard launched its first ship – the *Wan Nian Qing* (the name means 'Qing forever', see Photo 5.1), it sent a report to the Imperial Court complaining of the high

[360] YWYD, Vol. 5, p. 7.
[361] YWYD, Vol. 5, p. 37. 1 *shi* = 60.453 kilograms

maintenance costs. The report pointed out:

> '*the maintenance of a large ship costs around 2,100 taels per month, while that of the small ones costs around 1,500 taels per month. Now that* [the Navy Yard] *had built three large ships and two small ones, they cost around 9,000 taels monthly to upkeep …* [the financial balance of] *the Navy Yard is already in deficit, and the expenses* [on maintenance] *will continue to grow exponentially as more ships are to be built in the future.*' [362]

The economic hardship was only getting worse. Financial records of the navy yard show that in the period between 1867 and 1874, ship maintenance took up 3.6 per cent of its total expenditure, whereas in the period between 1878 and 1880, the money spent on maintaining the ships increased to 39.4 per cent. Maintenance expenses became the largest item of expenditure of the Fuzhou Navy Yard in the late 1870s.[363]

In response to the navy yard's memorial, the Imperial Court suggested that the ships could be loaned out to the various coastal provinces. It was expected that by adopting this policy, the coastal provinces could save the expenses of hiring or buying steamships from abroad. At the same time the policy should also lighten the Fuzhou Navy Yard's burden of maintaining the ships and training sailors.[364] The coastal provinces were in doubt about the quality of the Fuzhou-built ships. Yet they cooperated and adopted some of the ships to use them for transportation in coastal waters and low intensity constabulary missions such as anti-piracy and anti-smuggling. But this policy only temporarily mitigated the 'symptom' of the financial difficulties that confronted the navy yard. The fundamental cause of the problem remained unaddressed: China's economy lacked the element of maritime commerce; a self-sufficient agrarian economy could hardly support a steam navy.

This policy also had a severe side effect: the military value of the Fuzhou-built ships was further lowered. The rapid development of naval

362 HFD II, Fuzhou Navy Yard, p. 306.
363 Wang, *Coastal Defence in the Late Qing Dynasty*, p. 622.
364 YWYD, Vol. 2, pp. 307-312.

technology in the 19th century transformed maritime designs, with military and merchant vessels became increasingly different. As the commonalities between the two types of vessels decreased, it became more and more difficult to meet the needs of military and merchant users with the same hull. Warships usually preferred small silhouette, thick armour, robust engines and heavy guns, features that had no practical value for merchantmen. Reconciling the requirements of the two types of vessels became increasingly challenging and a balanced trade-off of features was increasingly difficult to achieve. The Fuzhou Navy Yard originally intended to build warships that could temporarily be used as cargo ships (after all they were still warships); but the provincial users had very low requirement on military performance, they wanted lightly armed merchantmen. As the ship loaning policy changed the rule of the game into a 'buyers' market', the requirements of the provincial users prevailed. Consequently, military performance took a backseat to cargo capabilities. The Fuzhou-built ships drifted off from their original course of military vessels and became essentially armed merchantmen.

Since the dominant requirement for provincial users was cargo capabilities rather than military value, ships of high fighting capabilities were less welcomed, as they were usually expensive to maintain and less appropriate for merchant use. For example, the cruiser *Yang Wu* was the ship that featured the most advanced military performance of all the Fuzhou-built ships launched in the 1860s and the 1870s (see Photo 5.2).[365] But it was not welcomed by provincial users and remained idle in the Navy Yard for nearly three years until it was commissioned as a training vessel of the Fuzhou Naval Academy in 1875. New technology did not introduce new missions to the ships. Lightly armed and big-hulled ships were more popular among provincial users because they had better cargo capacities, yet their light firepower was sufficient for anti-piracy and anti-smuggling duties. In order to make the ships more popular among provincial users, the Fuzhou Navy Yard further increased the ships' cargo capabilities at the expenses of their military performance (see table 5.1).

'Dual-purpose ships' became the major product of the Fuzhou Navy Yard. Essentially, they were armed merchantmen rather than men-of-war. For nearly

[365] Yang Wu was a copy of French unprotected cruiser Résolue.

two decades between the opening of the Fuzhou Navy Yard and the outbreak of the Sino-French war, seventeen out of the nineteen ships that had a larger than one thousand tons displacement built by the Fuzhou Navy Yard were such 'dual-use ships'. The seventeen 'dual-purpose ships' were of two classes: the *Wan Nian Qing* class and the *Wei Yuan* class. Twelve of the former were built between 1868 and 1876, and five of the latter were launched between 1877 and 1884. The *Wan Nian Qing* class 'dual-use ships' featured wooden keel, unarmoured hull, and were usually armed with five to seven guns (see Table 5.1). The *Wei Yuan* class had iron ribs and wooden hull, and was usually armed with six to seven guns and a number of smaller weapons.

As trade-offs between military vessels and merchant ships, the military value of these 'dual-purpose ships' was severely compromised. Many Fuzhou-built 'dual-purpose ships' had their cargo space enlarged and boilers vertically placed to increase their cargo space, but such characteristics severely lowered survivability of these ships in war.[366] The enlarged hull would make the ship an easier target, while military vessels usually did not prefer vertical boilers because the part higher than the draft line would lose the protection of water body. A contemporary critique pointed out that the 'dual-purpose ships' were in fact '*not competent in either regards*'.[367] Among the twelve ships of the *Wan Nian Qing class*, five ships *Fei Yun, Ji An, Yong Bao, Fu Bo* and *Chen Hang* took part in the 1884 Battle of Fuzhou. Apart from the 1560-ton wooden cruiser *Yang Wu*, they were the largest ships on Chinese side. The inadequacy of these 'dual-purpose ships' as military vessels was clearly reflected by the fact that the French fleet sunk most of the Chinese ships within an hour when the exchange of fire started.[368]

Spurred by the catastrophic defeat in the Battle of Fuzhou, Pei Yinsen (the eighth Navy Yard Commissioner, in office 1884 - 1890) announced that the navy yard would stop building 'dual-purpose ships' and shift its focus to the building

366 Qingyuan Lin, *福建船政局史稿 Fujian Chuanzheng Ju Shigao [A Draft History of the Fuzhou Navy Yard]*, (Fuzhou: Fujian People's Press, 1999), pp. 488-500, 501-505.
367 CZZYHB, Vol. 30, p. 5.
368 Other materials claimed that most of the Chinese ships were sunk by the French within fifteen minutes. Benjamin A. Elman, 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895'. *Modern Asian Studies,* Vol. 38, No. 2 (2004), p. 316. The French had seven major warships on their side: *Volta, Châteaurenualt, La Galissonniere, Triomphante, Duguay-Trouin, Villars, and d'Estaing.*

of proper men-of-war. A number of pure warships were built in the second half of the 1880s, such as the 1300-ton torpedo cruiser *Guang Jia*, the 1000-ton torpedo cruisers *Guang Yi* and *Guang Bing*, and the 2200-ton coastal defence gunboat *Ping Yuan.* Yet the idea of 'dual-purpose ships' revived in the early 1890s. Both the ninth and the tenth Navy Yard Commissioners proposed to build 'dual-purpose ships'.[369] For a variety of reasons, their proposals were not put into practice.

The idea of 'dual-purpose ships' haunted the Fuzhou Navy Yard. The yard built a total number of thirty-three ships between 1868 and 1894, which made it the largest shipbuilding centre in the country (the second largest shipbuilding centre, the Jiangnan Arsenal launched only eight). Financial survival was the paramount concern for a shipbuilding centre as large as the Fuzhou Navy Yard. The yard had to fit the ships into the economic reality of the country in order to be able to sustain itself. In the absence of a maritime economy, 'dual-purpose ships' were the best and probably the only solution, even though it seriously compromised the military value of the ships. The building of such ships consumed a large amount of financial resources that were originally earmarked for building warships and fostering naval modernisation. It also wasted time, which was exceptionally precious for the infant Chinese shipbuilding industry. In an age characterised by rapid advancement of naval technology, the Fuzhou Navy Yard was bogged down to ships of very limited military value for nearly fifteen years. Consequently, catching up with the West became increasingly impossible for the Fuzhou Navy Yard.

[369] Zuoxing Zhang ed., *船政文化研究——船政奏议汇编点校辑 Chuanzheng Wenhua Yanjiu: Chuanzheng Zouyi Huibian Dianjiaoji [Researches on Fuzhou Navy Yard's Achievements: Comments and Corrections regarding A Collection of Memorials concerning Navy Yards]*, (Fuzhou: Haichao Sheying Yishu Chubanshe, 2006), p. 426, 436.

Name		Launched	Modifications
Wan Nian Qing	万年清	1869.6	• Arguably an enlarged version of the French second-class propeller aviso *La Motte-Picquet*, • Armed with six naval guns of various types
Fu Bo	伏波	1870.12	• Modified version of the *Wan Nian Qing*; later ships were based on the *Fu Bo* • Reduced draft and reduced length-beam ratio, and enhanced load-carrying ability • Armed with seven naval guns of various types
An Lan	安澜	1871.6	• Dimensions identical to *Fu Bo* • Armed with five naval guns of various types
Fei Yun	飞云	1872.6	• Further reduced length-beam ratio • Armed with seven naval guns of various types
Ji An	济安	1873.1	
Yong Bao	永保	1873.8	• Dimensions identical to *Fei Yun* and *Ji An* • Built with further increased cargo space • Carried little to no weapon when launched
Hai Jing	海镜	1873.11	
Chen Hang	琛航	1874	
Da Ya	大雅	1874.5	
Yuan Kai	元凯	1875.6	• Dimensions identical to the *Fei Yun* and *Ji An* •Armed with only one main gun and eight auxiliary guns when commissioned into service
Deng Ying Zhou	登瀛洲	1876.6	• Further reduced length-beam ratio • Armed with seven naval guns of various types
Tai An	泰安	1876.11	• Dimensions identical to the *Deng Ying Zhou* • Armed with seven naval guns of various types

Table 5.1 A list of the twelve ships of the *Wan Nian Qing* class.[370] It can be distilled from the table that the ships' military value was increasingly lowered. Later ships of the *Wan Nian Qing* class were armed merchantmen rather than warships.

[370] Lin, *A Draft History of the Fuzhou Navy Yard*, pp. 488-495. Zhang, *Researches on Fuzhou Navy Yard's Achievements*, passim.

The Ocean-Going Warships

In spite of the compromised military value, the Fuzhou Navy Yard's 'dual-purpose ships' were welcomed by provincial users as they suited China's economic reality. In contrast, the ocean-going warships built by the Jiangnan Arsenal featured much stronger fighting capabilities, but such ships were incompatible with the nation's economic reality. The *Hai An* class, which we will discuss in this section, was an example of the latter (see Photo 5.3). Navalist Self-Strengtheners like Ding Richang believed that China's maritime defence force should have, to use his words, 'large military ships' as its backbone. It was a commonplace among advocates of sea-going warships that they had spent considerable amount of time in the coastal provinces where they had the opportunity to learn first-hand about Western men-of-war. Their view of maritime defence was largely shaped by their direct contacts with such ships. Yet it seems that their understanding of Western military superiority focused only on its ships and guns. A brief review of their writings on naval modernisation reveals that words like 'heavy guns' and 'large warships' appeared frequently, but there was little talk about the socio-economic basis that buttressed Western naval strength. It would seem logical to infer from this that they had overlooked the connection between the two.

Ding Richang was a typical example of advocates of sea-going warships with experience in coastal provinces (not to be confused with Ding Ruchang, Commander-in-Chief of the Beiyang Fleet).[371] After being discharged from the position of county magistrate in the anti-Taiping War in 1861, he turned his focus to building Western-style weapons (mostly field guns and ammunitions) and became one of the most outstanding makers of Western-style arms in China of the time. In 1865, he was appointed as the superintendent of the Jiangnan Arsenal, the most important firearm industrial plant and the second largest shipbuilding centre of the country. His new position enabled him to expand his repertoire to the building of warships. As to how to strengthen China's maritime defence, he argued that Western military superiority came from their 'sturdy

[371] Edwin Pak-wah Leung, ed., *Political Leaders of Modern China: A Biographical Dictionary*, (Westport, CT: Greenwood Press, 2002), pp. 32-33.

ships and sharp guns'.[372] He claimed that China could only offset Western military superiority if it was equipped with the same equipment.

Champions of ocean-going warships like Ding denounced the Fuzhou-built 'dual-purpose ships' as militarily unworthy. He criticised that '[they] *can be used for transportation, but are not suitable for offensive missions.* [They] *can be used to suppress smugglers and pirates, but were not capable for repelling foreign aggressors.*' [373] Instead, they called for more fighting-capable ships. In a memorial to the Throne, Ding suggested that only large warships could safeguard China against foreign aggression. He explained:

> '[a sea-going navy] *should have steam vessels as its primary weapon, in particular large, military ones.* … [if we have such ships] *all other ships could be removed from service. …* [as far as war at sea is concerned] *a hundred* [small junk boats] *are no equal to one single large warship. …*' [374]

Ding's enthusiasm for large warships directly contributed to the birth of *Hai An* and her sister ship *Yu Yuan*. The former was launched in May 1872 and the latter in December 1873. The *Hai An* class was 76m in length, 13.6m in width, and had a draft of 5.9m. It had a displacement over 2600-tonnes, a cruise speed of 10.4kts, and an armament of twenty-four guns mounted broadside and a complement of three hundred and sixty men.[375] It was, by far, the mightiest warship Chinese navy yards had built. To navalists like Ding, the *Hai An* and *Yu Yuan* were a great achievement. Ding's political ally Li Hongzhang, who later became patron of the Beiyang Fleet, extolled that the *Hai An* class was the best ship China had ever built.[376] The size of the ship remained unrivalled for nearly sixty years until the cruiser *Ping Hai* was launched by the Fuzhou Navy Yard in the Republican era.

However, the *Hai An* class was extremely expensive to build and maintain. The building of the *Hai An* cost 355,189 *taels*, while the building costs of *Yu Yuan*

---

372 '坚船利炮'
373 YWYD, Vol. 2, p. 393.
374 CBYWSM-TZ, Vol. 98, p. 24.
375 For more detailed account of the *Hai An* class see Chinese newspaper *Shun Pao*, 29th, the 5th month, Tongzhi 11th year; and Wright, *The Chinese Steam Navy*, p. 34.
376 YWYD, Vol. 4, p. 29.

were slightly lower at 318,716 *taels*.[377] This was a heavy financial burden to bear for the Jiangnan Arsenal. B. Fan's research shows that in the same period of time, the average amount of allocation that Jiangnan Arsenal received was around 437,000 *taels* annually.[378] This means the building of a *Hai An* class ship took up roughly seventy to eighty per cent of the arsenal's annual allocation. Moreover, the three hundred and sixty crews of *Hai An* cost 5,700 *taels* monthly to upkeep.[379] This was an amount nearly three times higher than the cost of the aforementioned 'dual-purpose ships'. In contrast, *Wan Nian Qing* required only 2,126 *tales* monthly to maintain.[380] Not to mention that 'dual-purpose ships' like the *Wan Nian Qing* could further reduce their maintenance cost by running as cargo ships. The *Hai An* class, on the contrary, could not navigate freely in the littoral waters and in the Yangtze River due to its deep draft, which further restricted its use in peacetime.

The accelerated development of naval technology in the second half of the 19th century quickly rendered many warships obsolete.[381] This meant that if navalist Self-Strengtheners like Ding wanted to maintain a naval strength comparable to that of foreign naval powers, they would have to keep building state-of-the-art ships. But China's financial predicament did not allow them to do so. The *Hai An* was commissioned into the Nanyang Fleet, the *Yu Yuan,* launched second, was sealed up in the Jiangnan Arsenal's dockyard due primarily to a shortage of funds. *Yu Yuan* was only commissioned into service when *Hai An* was taken out of service in 1878. The *Yu Yuan* participated in the Sino-French War and was sunk in the Battle of Shipu. The single-minded pursuit of firepower pushed the Jiangnan Arsenal towards the verge of bankruptcy. The shipbuilding activities in the Jiangnan Arsenal were virtually stopped after the launch of the *Yu Yuan*. The arsenal turned its focus to manufacturing field guns, naval guns and

377 YWYD, Vol. 4, p. 40.
378 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 1344.
379 YWYD, Vol. 4, p. 40.
380 HFD, II, Fuzhou Navy Yard, Vol. 1, pp. 423-429.
381 It is highly possible that the *Hai An* class was a copy of French frigate *Armorique*. Yue Chen, *近代国造舰船志 Jindai Guozao Jianchuan Zhi [A History of the Domestically Built Steam Warships in Late Qing]*, (Jinan: Shandong Huabao Press, 2011), p. 305. The *Armorique* was a warship built in the mid-19th century transition period from the age of sail to the age of steam. This meant that the *Hai An* class had already become obsolete when it was launched in the early 1870s, at the same time its construction had almost bankrupted the Arsenal. In spite of its relatively higher military value, the *Hai An* class was in fact a heavy burden in terms of finance and an obsolete ship in terms of performance.

ammunitions, only resuming shipbuilding sporadically thereafter (200-ton gunboat *Jin Ou* in mid-1870s and 1480-ton cruiser *Bao Min* in mid-1880s).

The Littoral/Riverine Gunboats

A third school of naval thinking can be called the school of littoral/riverine gunboats. The proposal for building such ships came from Peng Yulin. Peng was a Xiang Army *water force* veteran and was appointed as commander of the Yangtze River *water force* after the anti-Taiping War. His proposal was based on two main arguments. First, comparing with the promoters of the 'dual-purpose ships' and ocean-going warships, Peng, an anti-Taiping War veteran, had much more battlefield experience (though the actions he saw were mostly fights between war junks in rivers). He argued that China should not pursue oceangoing capabilities or contest for naval supremacy on the high seas. Instead, he argued that China's maritime defence strategy should stick to coastal defence. Second, Peng suggested, albeit implicitly, that a navy of littoral/riverine gunboats can be manned by sailors of the traditional *water forces*. In this way men of the *water forces* would not be excluded from naval modernisation.

In the proposal of littoral/riverine gunboats that Peng presented to the Imperial Court, he argued that a flotilla of small-sized shallow water gunboats would be ideal to defend China's coasts, because such ships would be able to make full use of the estuary and coastal terrains to prevent enemy advancement. His proposal suggested:

> '[With respected to the suggested riverine gunboats,] *at least ten such ships would be needed to form a squadron. Each one would cost seventy to eighty thousand taels … One million taels would therefore be amply sufficient. Such ships should be characterised by two* [main] *guns mounted on the bow and stern, and a number of auxiliary guns mounted broadside. Such ships should be commanded by experienced officers selected from the Yangtze water force and these officers should be assisted by* [naval college] *students who have a good command of foreign*

languages and mathematics. Fishermen from coastal islands could be recruited as pilots, [therefore we could] *get people who are familiar with the coastal waters …* [and] *could prevent these fishermen from being used by our enemies … Such ships should not contest the enemies on the high seas. In peacetime they should be patrolling the seas and in times of war they should be used to defend the estuary areas. If the enemy vessels dare to crash through,* [the gunboats] *should surround and attack them from the four directions, chasing and battering them, or lure them into shallow waters where they would be* [as cumbersome as being] *bogged down in muddy swamps whereas we could navigate freely.*' [382]

The Imperial Court soon authorised this proposal. But Peng was confronted with a major challenge: unlike the promoters of the 'dual-purpose ships' and ocean-going warships who had the wherewithal and industrial capabilities to bring their ideas into reality, Peng, a military commander, had neither money nor shipyard to build the envisioned ships. He had to seek help from provincial authorities.

But provincialism prevented Peng from getting the funds he needed to build the gunboats, as there was a lack of inter-provincial coordination and finances were organised provincially. Ten months after the first proposal, the Imperial Court received another memorial from Peng, in which he petitioned the emperor for ordering the Nanyang Superintendent to raise money and build the gunboats that he suggested.[383] Feeling no obligation to support the plan, the then Nanyang Superintendent Liu Kunyi passed the buck to other provinces. He argued that the money should be raised together by the various provinces in the upper reaches of the Yangtze River, namely Anhui, Jiangxi, Hunan and Hubei.[384] According to Liu, all these provinces would benefit from a strengthened maritime defence of the Yangtze estuary. Unsurprisingly, Liu's appeal fell on deaf ears. Peng waited another two years until 1882 when his old comrade-in-arms Zuo Zongtang took over the office of Nanyang Superintendent. Zuo held a more supportive attitude towards Peng's plan, but he only managed to raise funds enough for one of the

382 PYLJ, p.254-255.
383 PYLJ, p. 270.
384 LZCGYJ, p.2383.

suggested ten gunboats of such kind.

Provincialism, again, played a part in the building of the ship. Both the Fuzhou Navy Yard and the Jiangnan Arsenal bid for the contract of Peng's littoral/riverine gunboats, and both came up with their own designs. The detailed blueprint presented by the two shipbuilding plants cannot be recovered today as they went missing. But it can be inferred from the official correspondence and related newspaper coverage at the time that the Fuzhou Navy Yard, the most experienced Chinese shipbuilding centre came up with a design that featured a length of fifteen *zhang* (approximately fifty metres), which was more consistent with Peng's original idea.[385] The blueprint presented by the Jiangnan Arsenal, according to R. Wright, was a copy of the Rendel ram cruisers *Chaoyong* and *Yangwei* that China had bought from England couple of years ago.[386] But the Jiangnan Arsenal's design was much larger in size and more expensive in costs (a hundred thousand *taels* dearer than suggested).[387] Also, the Jiangnan Arsenal had not been building any major ships after the *Hai An* class in early 1870s (the only ship built in the Jiangnan Arsenal after the Hai An class was the 200-ton gunboat *Jin Ou*).

We can get a sense from the comparison that the Fuzhou Navy Yard would have been more capable of building Peng's gunboat, but it was the Jiangnan Arsenal that eventually won the bidding. It is obvious that provincialism played a key role in this case. Zuo Zongtang raised the money for Peng's littoral/riverine gunboat project; therefore he had the final word on who was to win the bidding. Despite that the Fuzhou Navy Yard was founded by Zuo himself in 1866, he felt no obligation to help the apparently more capable Fuzhou Navy Yard to win the bidding. Because at that time (early 1880s) he was governor-general of Liangjiang and Nanyang Superintendent, the Jiangnan Arsenal was now 'his' business, and the Fuzhou Navy Yard was now an undertaking of another province, which he was supposed to compete with. Zuo, the sponsor of Peng's gunboat project, favoured the Jiangnan Arsenal as it represented his provincial interests. Peng had little say in this matter and yielded to Zuo's arrangement.

The gunboat was eventually launched in 1885 and was named *Bao Min* (see

385 CZZYHB, Vol. 7, p. 110.
386 Wright, *The Chinese Steam Navy*, pp. 57-58.
387 ZZTQJ-ZG, Vol.8, pp. 165-166.

Photo 5.4), but it was not in conformity with Peng's original proposal. The ship was built at an eventual cost of 223,000 *taels*, three times higher than Peng's estimation. It was also severely over-sized with a displacement of 1,480 tons and dimensions of 225ft in length, 36ft in width and a draft of 14ft. Its main armament was two 5.9in Krupp BL guns mounted on bow and stern, with six 4.7in Krupp guns mounted broadside completing its armament. The ship bore many features of a cruiser rather than a small, nimble gunboat that fitted the requirements of operating around the Yangtze River mouth.[388] The fact that the *Bao Min* was usually mentioned alongside with other cruisers of the Chinese steam navy suggested that it was indeed regarded as a cruiser rather than a littoral/riverine gunboat. Being unaware of the inside story of *Bao Min*, R. Wright claimed that *Bao Min* was an unsuccessful attempt of the Jiangnan Arsenal to reproduce the concept of Rendel ram cruisers *Chao Yong* and *Yang Wei* (see Photo 5.8).[389] The *Bao Min* was indeed a failure. But it did not fail as a cruiser as R. Wright claimed. Rather, it failed as a gunboat that if successfully built would enable Peng's strategy of coastal defence. The plan of building more of such ships was disrupted by the death of Zuo Zongtang in 1885. Without the support of the provincial government, it was hard to continue the work. The *Bao Min* was the only ship built of its class.

Moreover, Peng Yulin did not receive the *Bao Min*. Instead of being commissioned into Peng's Yangtze River *water force*, the ship was commissioned into the Nanyang Fleet (both the Nanyang Fleet and the Jiangnan Arsenal fell within Zuo's sphere of influence). Perhaps Zuo Zongtang did not want to help Peng to build the gunboat at all. He may have utilised Peng's gunboat proposal as a pretext to build a new cruiser for his Nanyang Fleet. Whatever the truth, the incident reveals that shipbuilding was a local enterprise in the Qing imperial system. It was easier to get the Imperial Court to authorise proposals than to secure funds and to bring these ideas into reality. The money and the industrial plants were in the hands of local authorities. In the absence of effective central coordination, it was very hard for one maritime defence agency to persuade another to pool resources and make joint efforts. They had different perspectives

388 JNZZJJ, Vol. 3, p.55. See also Wright, *The Chinese Steam Navy*, p. 68.
389 Wright, *The Chinese Steam Navy*, p. 58.

towards maritime defence and they had local interests as their primary concern. As a result, the divergent opinion of the regional maritime defence agencies resulted in a severe lack of homogeneity among the home-built ships.

5.2 The Decline of the Indigenous Shipbuilding Capabilities

The Qing Empire had two major shipbuilding facilities: the Jiangnan Arsenal and the Fuzhou Navy Yard. Shipbuilding activities in the former virtually stopped after the launch of the *Hai An* class in the early 1870s. The Fuzhou Navy Yard remained the only shipbuilding centre of China and the production in the plant continued throughout the rest of the Self-Strengthening Movement. But a glance at the figure 5.1 shows that the production in Fuzhou became sluggish after a short spurt of growth in its early years. A total number of around 16,000 tons were built in the period from 1868 to 1874, averaging around 2,300 tons per year. While in the period between 1875 and 1894, only a total number of 23,800 tons were built, averaging as low as around 1,200 tons yearly (see Table 5.1). Apart from low productivity, the ships built in Fuzhou also had a problem of technological obsolescence. The technological gap between Chinese indigenous shipbuilding and the world's leading standard became increasingly widened. The Chinese steam navy reversed its course from primarily relying on indigenous shipbuilders in the 1870s, to mostly relying on foreign shipbuilders in the 1880s. In the 1894 Battle of Yalu, only three of the twelve Chinese warships presented in the battle were home-built.

The direct cause of the decline of the Fuzhou Shipyard was financial difficulties. Chinese shipbuilding industries and that of the West were supported by different financial systems. Many Western navies were buttressed by modern financial infrastructures, which were usually composed of a budgetary system, a banking system, governmental bonds, etc. Such financial infrastructures ensured great flexibility and a higher degree of efficiency in raising funds for their navies. The Chinese system, on the contrary, had no such financial infrastructure and its capabilities in funding the navy was low. The Fuzhou Navy Yard operated on a fixed amount of funds secured mainly from the customs revenue. This income

was hardly sufficient and was not stable. From time to time, funds earmarked for shipbuilding were diverted to address issues that were considered more important. The financial difficulties had considerably lowered the Navy Yard's capability of pursuing further expansion and technological innovations, and even the routine production of ships was often adversely affected.

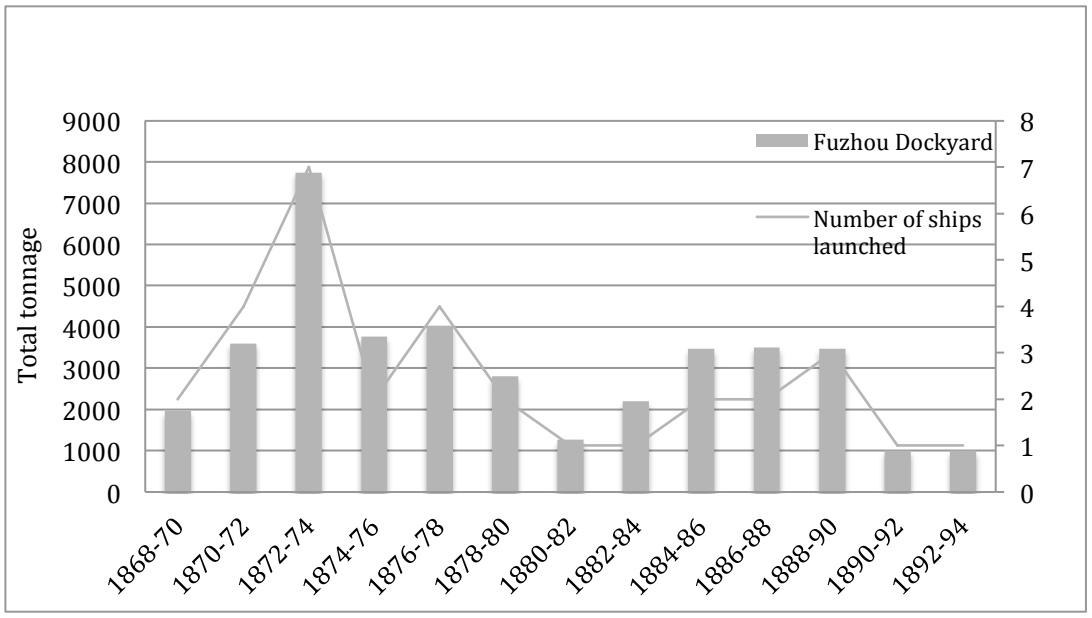


Figure 5.1 A graph showing biannual shipbuilding output by total tonnage and number of ships launched at the Fuzhou Navy Yard from 1868 to 1894.[390] We can see that there was spurt of growth in the period between 1868 and 1874, and that the production remained low in the years that followed.

The financial difficulties that confronted the Fuzhou Navy Yard were the outward signs of internal political issues, as financial decisions were in fact political decisions. The original intention of setting up the navy yard and building a steam navy was to protect the traditional Chinese order, but reforming the financing system to better support the navy yard necessitated institutional changes, which would have been contradictory to the original intention of the Self-Strengthening Movement. Without modern financial system, the financing of

[390] Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty*, Vol. 2, pp. 1512-1513. Lin, *A Draft History of the Fuzhou Navy Yard*, pp. 488-495.

the navy yard remained highly rigid. Technological developments made the ships increasingly expensive in late 19th century, but it was very difficult for the navy yard to secure additional source of funding to keep abreast with the latest trends in naval technology. Access to additional sources of revenue would have had to go through the Imperial Court, which was unwilling to commit itself to supporting the navy yard. New expenditures could only be added when the needs had become pressing and only if the navy yard commissioners could pinpoint a revenue source, which consumed a great amount of their energy. Sources of revenue were controlled by outside agencies, which usually did not feel obliged to support the Fuzhou Navy Yard. Some even stood in direct competition with the navy yard for funds as they saw buying ships from abroad as a better approach to naval modernisation.

***

The Fuzhou Navy Yard was a bureaucratic institution with shipbuilding functions operating on a fixed amount of income. Due to the low production rate and the bureaucracy in the navy yard, the Fuzhou-built ships were usually much more expensive than those built by Western private-owned companies. In the early years of the navy yard from 1868 to 1874, the negative consequences of this particular arrangement were not as significant as in the years that followed. This was partly due to that Zuo Zongtang (founding father of the navy yard) and Shen Baozhen's (the first Navy Yard Commissioner, in office from 1867 to 1875) status and prestige ensured the yard ample start-up funds, active support from foreign experts and relatively easier access to additional funds. [391] A total number of fifteen ships were built in this period.

[391] The Fuzhou Navy Yard was found by Zuo Zongtang, former leader of a local militia force – the Chu Army, with the assistance of two French advisors - Prosper Giquel and Paul d'Aiguebelle. The contract signed between Zuo and the two advisors involved the setting up of a Western-style naval yard, constructing a fleet of eleven 150-horse power gunboats and five 80-horse power gunboats, and establishing schools to train Chinese native naval officers and naval architects. The contract was signed in late 1866 and was completed in 1874. For a review of the Navy Yard, see David Pong, 'Keeping the Foochow Navy Yard Afloat: Government Finance and China's Early Modern Defence Industry, 1866-75', *Modern Asian Studies*, Vol. 21, No. 1. (1987), pp. 121-152. Steven A. Leibo, *Transferring Technology to China: Prosper Giquel and the Self-Strengthening Movement*, (Berkeley: University of California Press, Institute of East Asian Studies, 1985), pp. 76-79.

But the initial success faded away quickly as the start-up funds ran dry and both the foreign advisors and Shen Baozhen left the navy yard in the mid-1870s (Zuo was transferred to the office of governor-general of Ganshan in late 1866 before the shipyard was officially opened). The navy yard soon plunged into financial difficulties. Between 1876 and 1886, it received a fixed allocation of fifty thousand *taels* per month from the customs revenue.[392] This amount was hardly enough for the navy yard to maintain smooth production as new technologies made ships increasingly expensive. Only another eighteen ships were built until the end of the Self-Strengthening Movement. The output of the shipyard dropped to as low as around 1,200 tons yearly after 1874.

In this context, the navy yard was hardly able to spare money for expanding production and investing in new machines. Keeping abreast with the latest developments of naval technology was increasingly difficult for the navy yard. The building of wooden-hulled steamships continued for nearly ten years before the navy yard moved on to build composite ships (wooden planking over an iron frame) in 1877. It was probable that if it were not for the increase in the price of compass timbers (curvy wood for ship ribs) the building of wooden ships would have continued for many more years.[393] Q. Lin's research shows that in the first decade after 1874 the investment in new shipbuilding machinery had never exceeded 3.8 per cent of the total expenditure. In the following period between 1886 and 1894 the amount spent on upgrading machinery was even lower, less than two per cent of the total expenditure was spent on buying new machines and building new facilities.[394] In the wake of the First Sino-Japanese War, Bian Baoquan (the eleventh Navy Yard Commissioner, in office from 1894 to 1896) pointed out to the Imperial Court that in the decade preceding the First Sino-Japanese War naval technology improved on a daily basis, but the navy yard was not able to follow the latest developments because it lacked the 'machines and factories' that would enable it to do so.[395]

392 Lin, *A Draft History of the Fuzhou Navy Yard*, pp. 258-268.
393 Zhang, *Researches on Fuzhou Navy Yard's Achievements*, p. 89.
394 Lin, *A Draft History of the Fuzhou Navy Yard*, p. 267.
395 Ibid., 266.

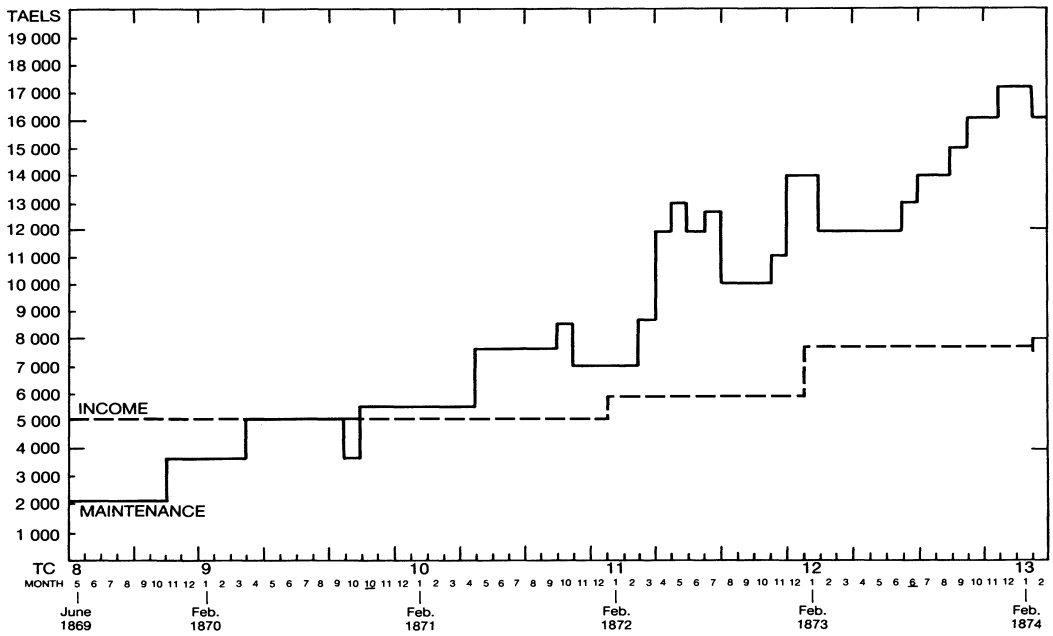


Figure 5.2 The balance of income and maintenance costs of the Fuzhou Navy Yard between 1869 and 1874.[396] The maintenance costs rocketed as an increasing amount of ships was launched, while the income remained almost unchanged.

The Fuzhou Navy Yard was not a commercial enterprise that could make profits from the ships built and sold; lowering the costs by increasing production was not a choice open to it. Its ships were to be adopted by the various coastal provinces or commissioned into the navy yard's fleet. Maintaining the ships was a heavy financial burden that consumed a great amount of the already tight budget. It can be seen from Figure 5.2 that the money spent on maintenance was actually much higher than the income of the shipyard in the period between 1871 and 1874. The introduction of the policy of loaning out the ships to the various coastal provinces partly relieved the navy yard from the pressure of ship maintenance, but the amount of budget that the maintenance consumed was still very burdensome. In the period between 1878 and 1880, the navy yard spent 49.4% of its total budget on ship maintenance.[397] For the Fuzhou Navy Yard, the more ships it built the more serious its financial difficulties became.

396 Pong, 'Keeping the Foochow Navy Yard Afloat', p. 129.
397 Wang, *Coastal Defense in the Late Qing Dynasty*, p. 622.

The production costs needed to be controlled. But instead of establishing a modern accounting system, the Imperial Court suggested the Shipyard to control the costs in an old-fashioned way – establishing a set of detailed regulations.[398] Both approaches could achieve cost control, but a key difference between the two was that the latter approach better suited the command economy. The Imperial Court had been using such method to control the costs of the building and maintenance of traditional war junks. H. Wang's study shows that the regulations of war junks' building and maintaining were so rigid that even the number of nails and the amount of paints applied to each single timber plank of the ships was clearly stipulated.[399] But there was a serious drawback in this method: it was too rigid to allow for innovations and technological improvements. This was, according to H. Wang, a key reason for the lack of technological improvements in the building of traditional war junks.[400] Now the Imperial Court intended to extend it to the building and maintaining of the steam navy. It is obvious that the Imperial Court failed to realise that steam warships were too technologically sophisticated and fast evolving for such rigid method of cost control to be applied. Wu Zancheng (the third Navy Yard Commissioner, in office from 1876 to 1879) managed to decline this proposal, which, if applied, would have further exacerbated the already low capabilities of innovation of the navy yard.

At the same time, the Fuzhou Navy Yard's nature as a bureaucratic body meant that its leadership tended to be conservative. All ten commissioners of the yard assumed office between 1867 and 1894 were scholarly-officials transferred from the mainstream officialdom.[401] The Qing Empire's official selection mechanism – the Imperial Examinations – dictated that knowledge of science and technology was structurally absent among the bureaucrats. Some officials developed a degree of interest in *Western learning* and tried to familiarise themselves with modern science and technology. For example, Shen Baozhen was said to have learnt about mathematics and physics when he was in charge of

398 HFD, II, Fuzhou Navy Yard, p. 801.
399 Wang, *Coastal Defence in the Early Qing Dynasty*, pp. 122-123.
400 Ibid., 134-141.
401 QMHJSL, p. 753.

the navy yard.[402] But officials like him were, after all, rare exceptions; most of the bureaucrats that were transferred to the positions of navy yard commissioner knew little about steam navy.

The short term of office of the Navy Yard Commissioners further exacerbated the problem of a lack of innovation. Most of the ten commissioners served too briefly to be able to familiarise themselves with the operation of the navy yard and to carry through new policies. During the nearly thirty years between the opening of the Fuzhou Navy Yard in 1867 and the First Sino-Japanese War in 1894-95, most of the navy yard commissioners had a short tenure ranging from only a couple of months to three years (there were only two exceptions, Shen Baozhen and Pei Yinsen, who held office for eight years and seven years respectively). Consequently, most of them tended to adopt a conservative attitude towards the application of new technologies for the sake of their career advancement. Instead of building sophisticated ships with new technologies, they would rather use mature and well-tested designs to ensure the reliability. Li Zhaotang (the fourth Navy Yard Commissioner, in office from 1880 to 1883) compared China's nascent shipbuilding industry to the initial stage of learning to compose essays. He said that one should not '*try advanced techniques* [before he fully commanded all the basics].'[403] Admittedly, he was right in the sense that being conservative could lower the risk of wasting money and time on immature designs. But such prudence was overstressed to an extent that it hindered technological improvements in the navy yard.

Due to the abovementioned reasons, the Fuzhou Navy Yard declined.[404] The ships built in Fuzhou were obsolete, less fighting-capable, and yet more expensive than foreign-built ships. Since early 1880s, the various regional fleets began to turn away from the Fuzhou Navy Yard and developed a strong reliance on British and German shipbuilders for new ships. The shipyard was heavily criticised for failing to produce 'usable' ships. Even the Imperial Court, who rarely made open criticisms, joined in. An Imperial Edict put it: '*it has been more than twenty years since* [the empire] *embarked on the preparation of maritime*

[402] HFD, II, Fuzhou Navy Yard, No. 151, 154, 156.
[403] HFD, II, Fuzhou Navy Yard, p. 890.
[404] The decline of the second largest Chinese military industrial centre – the Jiangnan Arsenal resulted largely due to the same reason. Jiang, *Dragon Flags over the Navy*, p. 36.

defence, but little results have been yielded, the various ship built by Fuzhou Navy Yard are not useable.'[405] But because China refused to bring about political and economic changes to create an environment that could nourish the growth of modern defence industry, it was almost impossible for the navy yard to attain a high standard. A contemporary official observed: '[the Fuzhou Navy Yard] *was fully aware of the rapid development of the steamships in foreign countries, but the ships built there remain unimproved and were not fit to use … The various provinces turned to foreign shipbuilders when they need warships*.'[406]

***

As an agrarian economy, China did not have sufficient financial resources to support a project as costly as naval modernisation. The money spent on the steam navy was primarily allocated from the customs revenue, which, at best, was growing slowly. Consequently, there were fierce competitions for funds among the regional maritime defence agencies, and they also had different perspectives on how to augment China's naval power. On the one side, there was the argument that naval modernisation should be achieved by taking the shortcut of acquisition from abroad, because foreign-built ships were more economic and advanced. On the other side, other Self-Strengtheners suggested that China should develop its own shipbuilding capabilities. Self-dependence, as they saw it, was of vital importance to national security.

The appeal for buying ships from abroad overwhelmed that of domestic shipbuilding to become the dominant voice since the late 1870s. This was partly because Li Hongzhang, the most powerful Self-Strengthener supported the former, and partly because the main shipbuilding plant in China – the Fuzhou Navy Yard – was in decline since the mid-1870s. In order to get more money to buy ships from abroad, it was necessary to divert the funds from the Fuzhou Navy Yard, which continued to receive around six hundred thousand *taels* per year in the first half of the 1880s. The most effective way to attain this purpose was to destroy the reputation of the Fuzhou Navy Yard. To the

405 ZZTQJ-ZG, Vol. 8, p. 534. LZCGYJ, p. 2090.
406 QMHJSL, p. 127.

Self-Strengtheners who tried to wrest funds from the navy yard, it was a means that could win the competition once and for all; but to China's indigenous shipbuilding industry, the damage was fatal.

The core of the Navy Yard's shipbuilding potential – the Department of Engineering (*Gongcheng Chu*) was not only the brains of the Fuzhou Navy Yard, but also the cradle of China's shipbuilding talent. In spite of its large population, China was not a country rich in talent of modern maritime engineering. On the contrary, there was a serious lack of professionals capable of conducting naval construction. China's first and the only institution that provided education in naval architecture – the Fuzhou Naval Academy – was opened in 1867. In the 1880s, only fourteen naval architects had completed their basic and advanced training and became fully qualified naval architects.[407] Records show that most of these native Chinese naval architects were concentrated in the Department of Engineering of the navy yard, which started to function as the brains of the institution since the 1880s.[408] This group of naval architects, though small in number and largely inexperienced, was all that China had for its shipbuilding industry at the time (see Table 5.2).

An opportunity to destroy the reputation the Fuzhou Navy Yard presented itself in the mid-1880s. Forced by the pressure to build more advance warships, the navy yard turned away from 'dual-purpose ships' and began to pursue more sophisticated designs. In the last few decades of the 19th century, warships designs evolved at a quickened pace and in a kaleidoscopic fashion. Even the world's leading naval powers could not guarantee that all the ships that they built, especially the sophisticated ones, were successful. The Fuzhou Navy Yard was financially weak and its naval architects were unfledged. Under these conditions, the Fuzhou Navy Yard was prone to make mistakes in building

[407] By the end of the Self-Strengthening period, a total number of ninety-one students had finished basic education in naval architecture in the Fuzhou Naval Academy and only thirty-four elite students among them were sent to France for advanced education in naval architecture. The first batch of twelve students was sent to France in 1877, and the second batch of eight students was sent to France in 1882, and the third batch of fourteen students was sent to France in 1886. The duration of their study in France varied from three to six years. The education in naval architecture in Fuzhou was only of basic level and only those educated in France should be considered as professionals of advanced level.

[408] Qingyuan Lin, '论福建船政局管理的先进性 Lun Fujian Chuanzhengju Guanli de Xianjinxing [On the Advanced Nature of Fuzhou Navy Yard Administrations]' in *船政文化研究 Chuanzheng Wenhua Yanjiu [Researches on Fuzhou Navy Yard and Associated Cultural Achievements]*, Zuoxing Zhang ed., (Beijing: China Social Press, 2003).

advanced warships. The mistakes could be utilised by other regional maritime defence agencies to attack the navy yard and to justify the acquisition of ships from abroad.

The defects of the Fuzhou-built ships were often exploited by the navy yard's competitors to discredit the naval architects' reputation and to justify their projects of acquisition from abroad. Take the coastal defence gunboat *Ping Yuan* for example (see Figure 5.7). It was a copy of the French *Acheron* class gunboat. Launched in January 1888, the *Ping Yuan* was arguably the most advanced and sophisticated warship that China built in the 19th century. For such a state-of-the-art piece of work, a degree of imperfection was almost unavoidable. But the defects revealed in *Ping Yuan*'s sea trial were pounced on by Li Hongzhang, the Fuzhou Navy Yard's northern competitor who saw buying ships from abroad as a better approach to naval modernisation. Li denounced the then Navy Yard Commissioner Pei Yinsen (the eight Navy Yard Commissioner, in office 1884 –1890) for being *'completely ignorant*' of steam navy and criticised the *Ping Yuan* as a disastrous consequence of Pei being '*bewitched*' by the architects of the navy yard.[409] Three naval architects of the Department of Engineering Wei Han, Chen Zhao'ao and Zheng Qinglian who supervised the building *Ping Yuan* had their titles suspended as a punishment for the 'poorly built' ship.

In reality, the *Ping Yuan* was not as poorly built as claimed by its critics. The defects were fixed with a replacement of a faulty air exhauster and a couple of other minor parts.[410] In spite of the heavy-handed criticism, Li Hongzhang later accepted the ship and commissioned it into his Beiyang Fleet. In the Battle of Yalu in 1894, the *Ping Yuan* claimed multiple hits on the Japanese Combined Fleet's flagship *Matsushima* and capital ship *Itsukushima*.[411] The Imperial Japanese Navy continued to use *Ping Yuan* as a first-rate gunboat after it was captured in the Battle of Weihaiwei until it was mined and sunk in the 1904 Russo-Japanese War.[412] Following Li's attack against the ship when it was

409 LWZGQJ-YSHG, Vol. 17, pp. 40-42.

410 CZZYHB, Vol. 16, p. 56.

411 Yasuzumi Saneyoshi, *The Surgical and Medical History of the Naval War between Japan and China*, (Tokyo: Tokyo Printing Company, 1901), p.4-6, 15-16. Ma, *A New Examination of the History of Modern Chinese Navies*, pp. 159-160.

412 The *Ping Yuan* was initially called *Ping Yuan Go* in the Imperial Japanese Navy and was renamed *Heien* in

launched, there was no other record of complaint about the quality of *Ping Yuan*. Li's attack on the *Ping Yuan* was largely motivated by inter-regional competitions for funds.

The *Ping Yuan* incident was not the only case of its kind. A similar incident happened five years earlier to other two chief architects of the Department of Engineering, Wu Dezhang and Li Shoutian. In 1883, Zuo Zongtang, the then governor-general of Liangjiang petitioned the Imperial Court to punish Navy Yard Commissioner Zhang Mengyuan (the fifth Navy Yard Commissioner, in office 1883) and naval architects Wu Dezhang and Li Shoutian for malpractice in the building of cruiser *Kai Ji* (see Photo 5.6).[413] As a copy of French cruiser *Duguay-Trouin*, the *Kai Ji*, too, was one of the most advanced warships that the Fuzhou Navy Yard had built in the Self-Strengthening Movement. Zuo criticised that the ship was different from the original design in its draft depth and cruise speed. Besides, there was a cost overrun and the delivery was also delayed.[414] Consequent to Zuo's petition the architects who were involved in the building of *Kai Ji* received no reward, which was rather unusual for major works like this.[415] In fact, none of the defects that Zuo used as ammunition against the naval architects were major. We know only too well that even today very few contracts for military hardware can be carried out without delays and cost inflation. Presumably, the motivation for Zuo's attack against Fuzhou Navy Yard was to justify the purchase of two other cruisers of the same class (*Nan Chen* and *Nan Rui*) that he had ordered from Germany.

The competitions for funds between the various regional maritime defence agencies brought fatal damage to the reputation of the Fuzhou Navy Yard, which contributed to the fall of the navy yard's annual allocation from around six hundred thousand *taels* in the period between 1876 and 1886 to around 2.6 hundred thousand *taels* between 1886 and 1894.[416] Between 1886 and 1894 the production plummeted further to around 820 tons per year and the navy yard was forced by financial predicaments to lay off a considerable number of

---

1900.
413 ZZTQJ-ZG, Vol. 8, p. 368.
414 ZZTQJ-ZG, Vol. 8, pp. 366-367.
415 Chen, *A History of the Domestically Built Steam Warships in Late Qing*, p. 194.
416 Wang, *Coastal Defense in the Late Qing Dynasty*, p. 621.

operatives. The damage that the job cuts did to China's shipbuilding capabilities was incalculable. A record shows that '*because there was not much work*, *some* [naval architecture] *students stood idle in the academy for more than ten years without getting commissions.*'[417] Many young naval architects were forced to find other livelihoods and a considerable number chose to leave the navy yard and to return to their hometowns.[418] A brain drain also took place among the elites students who studied abroad. A *Zongli Yamen* report pointed out that: *'when the students returned to China, many stood idle. Forced by poverty,* [they] *went to find livelihoods elsewhere. Good ones were hired to work abroad, less good ones worked as translators in foreign consulates or foreign firms. Our talented students were wasted by us, but were utilised by foreign countries; whereas when we need such talent, we have to recourse to foreign countries.'*[419] The brain drain of naval architects was the *coup de grâce* for the Fuzhou Navy Yard. Chinese indigenous shipbuilding industry fell into irreversible stagnation in the late 1880s.

[417] Bao, *The History of the Chinese Navy*, p. 699. Cuilian Gao, '近代中国海军教育与甲午海战 Jindai Zhongguo Haijun Jiaoyu Yu Jiawu Haizhan [Modern Chinese Navy Education and the Jiawu Sea Battles]', *Military Historical Research*. Vol. 15, No. 2. (Summer 1990), pp. 115.
[418] CZZYHB, Vol. 47, p. 20.
[419] QMHJSL, p. 129.

Name in Pinyin	Name in Chinese	Expertise	Position in the Department of Engineering
Wei Han	魏　瀚	Marine Engineering and gunnery (France)	Chief Architect
Chen Zhao'ao	陈兆翱	Marine Engineering (France)	Chief Architect
Zheng Qinglian	郑清濂	Marine Engineering and Gunnery (France)	Chief Architect
Wu Dezhang	吴德章	Marine Engineering and Gunnery (France)	Chief Architect
Yang Lianchen	杨廉臣	Marine Engineering and Gunnery (France)	Chief Architect
Li Shoutian	李寿田	Marine Engineering (France)	Chief Architect
Lin Qingsheng	林庆昇	Metallurgy (France)	Supervisor of the Metalworking Factory
Chi Zhenquan	池贞铨	Metallurgy (France)	Supervisor of the Metalworking Factory
Lin Rizhang	林日章	Marine Engineering and Metallurgy (France)	Supervisor of the Marine Engineering Factory
Wei Xian	魏　暹	Marine Engineering (France)	Assistant Chief Engineer
Chen Caizhui	陈才锥	Torpedo (France)	Supervisor of the Torpedo Factory
Ren Zhao	任　照	Foundry (France)	Supervisor of the Hull Factory
Chen Linzhang	陈林璋	Marine Engineering (France)	Supervisor of the Hull Factory
Wang Guifang	王桂芳	Foundry (France)	Supervisor of the Metalworking Factory
Wu Xuejiang	吴学锵	Shipbuilding (France)	Supervisor of the Iron-Casting Factory

Table 5.2 A list of the senior naval architects of the Department of Engineering in the 1880s.[420] Most of these naval architects entered the Fuzhou Naval Academy in the late 1860s and finished their advanced education in France in the early 1880s.

[420] Lin, 'On the Advanced Nature of Fuzhou Navy Yard Administrations'. Wang, *Coastal Defence in the Late Qing Dynasty*, pp. 618-619.

5.3 Naval Acquisitions from Abroad

A tug-of-war for power between the Imperial Court and the local leaders characterised the political landscape of the Self-Strengthening Movement. The latter obtained a degree of autonomy consequent on the turmoil of the mid-19th century, which they continued to enjoy well into the Self-Strengthening Movement, while the former wanted to restore control. To the Imperial Court, buying ships from abroad was the only viable approach to establish an imperial navy because the military industrial plants were in the hands of local authorities. On two occasions during the Self-Strengthening Movement, the Imperial Court tried to buy an imperial navy from abroad via the Imperial Maritime Customs Service.[421] But both attempts were thwarted by local leaders. In the first attempt in the early 1860s, the plan was aborted mainly due to the objection of local militia force leader Zeng Guofan. The struggle between the Imperial Court and Li Hongzhang, governor-general of Zhili and Northern Superintendent, failed the second attempt in the late 1870s.

***

The Lay-Osborn Flotilla was the Imperial Court's first attempt to buy a steam navy. The Taiping Rebellion made a Western style navy a necessity, because the areas seized by the rebel forces were mostly concentrated in the Lower Yangtze Plain and south-eastern coasts. A steam navy, as many saw it, could flank the Taiping rebels from the Yangtze River and the sea, and therefore would facilitate putting down the rebellion.[422] In early 1862, Prince Gong, the head of the *Zongli Yamen* commissioned Horatio N. Lay, the then Inspector-general of the newly founded Imperial Maritime Customs Service to purchase and equip a flotilla of steam warships for China. In September 1863, a flotilla of eight ships and around six hundred men (mostly British) was acquired and sailed to China under the

[421] The Imperial Maritime Costumes Services was established in the aftermath the Opium Wars. During the Self-Strengthening period, it was an office attached to the *Zongli Yamen* and was presided over in succession by two Britons: Horatio Nelson Lay from 1855 to 1863, and Robert Hart from 1863 to 1911.

[422] CBYWSM-XF, Vol. 79, pp. 16-19. Lü Shiqiang, *中国早期轮船经营 Zhongguo Zaoqi de Lunchuan Jingying [Early Steamship Projects in China]*, (Taibei: Institute of Modern History of Academia Sinica, 1962), pp. 46-56.

command of Captain Sherard Osborn of the British Royal Navy.[423]

This project, if successfully implemented, could have led to the first centralised Chinese steam fleet before the local authorities built theirs. But it was an attempt in vain. On the surface, it was the presumptuousness of Lay that rendered the attempt fruitless. According to an agreement reached in private between Lay and Captain Osborn, Osborn would be the sole commander-in-chief of this naval force. He was to take orders only from Lay, who in turn would be exclusively answerable to the Chinese emperor. More worryingly, Lay made it clear in the agreement that he would only pass orders on to Osborn if he *agreed* with them.[424] This would make Lay the *de facto* highest commander of the Chinese naval force. This arrangement ignited heated debates between Lay and the Chinese officials over the control of the fleet. The whole plan was eventually cancelled for the fear that Lay intended to use the flotilla project to turn over China's military authority into his own hands.

However, putting aside Lay's self-aggrandising tendency, if one looks into the essence of what became known as the Lay-Osborn Flotilla Incident, it becomes evident that the tug-of-war for power between the Imperial Court and local leaders played a key part in preventing the project from being a success. After all, Lay believed that the flotilla should be an imperial force rather than a regional one. In Lay's opinion:

> '*... the restoration and the preservation of peace in China called for the direct action of the Central Government directing Imperial, not Provincial, forces; an issue so vital as national peace and order should not, he maintained, be left to provincial satraps with their bands of undesirable foreign filibusters and their local levies of ill-trained native troops. Further, if China was ever to become strong and progressive in Western sense, the Central Government must be strengthened so that whenever and wherever necessary it could enforce its will, and the only way to bring*

[423] The eight ships constituted the Lay-Osborn Flotilla were: the 1000-ton dispatch vessel *Kiangsu* as flagship; the 670-ton wooden gunboat *Peking* (ex-HMS Mohawk); 670-ton wooden gunboat *China* (ex-HMS Africa); the 300-ton wooden gunboat *Amoy* (ex-HMS Jasper); the 450-ton iron dispatch vessel *Tientsin*; the 550-ton iron dispatch vessel *Kwangtung*. In addition, there were the steam yacht *Thule* and the store-ship *Ballarat*. For more details of the ships of the Lay-Osborn Flotilla, see Wright, *The Chinese Steam Navy*, pp. 16-17.

[424] Wright, *The Chinese Steam Navy*, p. 17.

this about was by the acquisition and control of a national army and a national navy.' [425]

It is clear that if it were not for the private agreement between Lay and Osborn, these ideas would have led to a navy under the direct command of the Chinese emperor, in other words, a Chinese 'royal navy'.

Apart from the disagreement over the command of the fleet, the Imperial Court welcomed the idea of an *imperial* navy. It was the Imperial Court, largely the *Zongli Yamen* under Prince Gong, who commissioned Lay to buy a navy from Britain, and Lay was explicit about the point that he was only to serve the emperor rather than local leaders. The Imperial Court was keen to have a navy of its own. Otherwise it would remain as an outsider of the anti-Taiping War, which was fought mostly between the Taiping Rebellion and the local militia forces, primarily the Xiang Army, the Huai Army and the Chu Army. It was negotiated between Beijing and Osborn that one third of the spoils of war that the latter captured in the actions against the Taiping Rebellion should be sent to Beijing, while the rest was to be divided equally between the Osborn and the Chinese local militia forces who had contributed to the victory. In the case that Osborn won a campaign by himself, one third of the spoils of war should go to the Imperial Court while Osborn was allowed to take all the rest.[426] The local militia forces were largely excluded from this negotiation between the Imperial Court and Lay.[427] It was obvious that the Imperial Court wanted to utilise the Lay-Osborn Flotilla to counterbalance the local militia forces.

The local militia leaders, Zeng Guofan in particular, were strongly against the idea of introducing a force beyond their control. He insisted that the ships should be manned by sailors selected from his Xiang Army *water force* and that only three to four British sailors should be allowed to remain aboard as instructors.[428] Zeng argued that if the steamships were to be manned by foreign sailors, Chinese *water force* men would feel frustrated because the giant foreign steamships

425 Wright, *Hart and the Chinese Customs*, pp. 241-242.
426 HFD, I, Acquisition of Ships and Guns, p. 174.
427 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 944.
428 Wang, *Li Hongzhang and the Beiyang Fleet*, p. 56.

would dwarf their old-fashioned junk boats.[429] The Imperial Court agreed with Zeng on the point that the ships should be manned mainly by Chinese sailors, but instead of using people from the Xiang Army, it was suggested that the sailors should be a mix of men picked from Manchus, men of the Xiang Army and Han Chinese from a variety coastal provinces.[430] Zeng declined the suggestion and insisted on his old plan.[431] It was obvious that he wanted to control the steamships by manning them with his troops. Zeng and the Imperial Court could not reach an agreement on the manning of that naval force. Eventually, the Lay-Osborn Flotilla was disbanded and the ships were resold. Hsü recorded: '*the Chinese government had spent a total of £550,000 purchasing and disbanding a fleet, from which it got nothing but headaches. The first attempt at a modern navy was a complete fiasco.*'[432] In fact, it was not only the first attempt at a modern navy that was failed, but more importantly to the Imperial Court, it was the first effort to establish an imperial navy that was failed by the tug-of-war for power between the Imperial Court and the local leaders.

***

The struggle for control of the steam navy between the Imperial Court and local authorities continued when Robert Hart replaced H.N. Lay to become the Inspector-general of the Imperial Maritime Customs Service, and Li Hongzhang replaced Zeng Guofan, who died in 1872, to become the most powerful local leader. This time, the struggles between the two revolved around two topics: the establishment of a centralised maritime defence agency, and what type of ship was most suitable for China's of maritime defence. Comparing with the last round of tug-of-war between the Imperial Court and local leaders over the Lay-Osborn Flotilla, this time the power struggle between the two had more far-reaching impacts on the development of the Chinese steam navy.

In contrast to his predecessor, Hart wielded much stronger influence in the Imperial Court and he knew more about naval matters. Lay who was considered

429 CBYWSM-TZ, Vol. 21, pp. 16-19.
430 YWYD, Vol. 2, p. 236.
431 HFD, I, Acquisition of Ships and Guns, Vol. 1, p. 73.
432 Hsü, *The Rise of Modern China,* p. 278.

self-seeking and domineering by officials in the Court, whereas Hart was more tactful and patient, and was therefore welcomed by his Chinese colleges in the *Zongli Yamen*. Prince Gong, who headed the *Zongli Yamen* until 1884, was the direct superior of Hart and the personal relation between the two was said to be very close.[433] At the same time, Hart had better knowledge of steam navy than Lay and he was better informed of the latest developments of naval technology. His former subordinate James D. Campbell was then based in London and acted as his representative.[434] The two kept in close touch via telegraph, so that Hart could learn the then latest developments of naval technology in Britain.

Hart had his own view of China's maritime defence. From the very beginning of his involvement in Chinese naval affairs he strongly opposed the idea of a seagoing navy and ironclad battleships. He believed that ironclad battleships were not the best option for China's maritime defence if the purpose of the navy was costal defence, because they were too expensive and their deep draft was not suitable for operating in China's coastal waters.[435] Instead, Hart recommended a type of ship specially built for the task of coastal defence, namely Rendel gunboats and Rendel ram cruisers. Hart's idea of Rendel gunboats echoed Britain's efforts to reinforce homeland coastal defence consequent on the scare of 'steam bridge' in the second half of the 19th century.[436] As to the tactical thinking behind the Rendel gunboats, William G. Armstrong, president of the Armstrong Whitworth & Co Ltd. where the Rendel gunboats were built, once explained:

> '… [the gunboats] *can be made to carry the heaviest artillery. They would present very a small target to the enemy's fire, and, at the varying distance at which they would be used, they would be extremely difficult to hit. They would be spread out so as to clear each other's smoke, and bring*

[433] CBYWSM-XF, Vol. 79, p. 21.
[434] James D. Campbell's office was in No.8 Storey's Gate, Westminster, London.
[435] Chinese records of Hart's arguments against ironclad battleships: LWZGQJ-PLHG, Vol. 18, p. 38. LWZGQJ-YSHG, Vol. 3, p. 7. YWYD, Vol.2, pp. 337-338.
[436] In the mid-19th century, it was feared in Britain that the introduction of steam engine to navy would wipe out the country's traditional naval superiority over France. Prime Minister Palmerston declared: '*the Channel is no longer a barrier. Steam navigation has rendered that which was before impassable by a military force nothing more than a river passable by a steam bridge*'. Roger Parkinson, *The Late Victorian Navy: The Pre-Dreadnought Era and the Origins of the First World War*, (Woodbridge and Rochester: The Boydell Press, 2008), p. 10.

a converging fire to bear upon a single ship. They could retreat, when necessary, into shallow water, and in many cases, maintain a fire over breakwaters which would afford them protection. Instead of being rooted to one spot like a battery, they could pursue, or retreat, or unite in taking up new positions … they would afford a flexible and powerful means of defence …' [437]

As to the ram cruisers, it can be learnt from the telegraph records between Hart and his London representative Campbell that they were to be used in complement to the Rendel gunboats.[438] The cruisers had a degree of offensive capabilities in coastal waters and were intended to be used together with the gunboats, which were mainly designed for defensive purposes. George W. Rendel, designer of the ram cruisers explained the rationale behind the design:

'*These vessels are not proposed as improved gunboats or to take the place of gunboats but an independent part of a naval force and as having duties quite distinct from those of the gunboats. While the gunboats from their light draught, their mobility, their diminutiveness and their number would be able to meet and defeat the attack of ironclads. These larger vessels from their great speed and artillery power combined would be able to follow up and search out ironclads and to choose their own mode and time of attack … five of the new vessels could be built for the cost of one … ironclad, collectively they would be at far greater power than the ironclad … The new vessels can never become out of date or useless like the ironclad, are far more easily maintained and are convertible to peaceful uses.*' [439]

The above two statements made by British shipbuilders proved that Hart's acquisition plan was logical and consistent. A navy composed of these ships

[437] William G. Armstrong, 'Address of Sir W. G. Armstrong, President' in *Minutes of Proceedings of the Institute of Civil Engineers; with Other Selected and Abstracted Papers*, James Forrest ed., Vol.68, (London: Institute of Civil Engineers, 1882), pp.43-44.
[438] 'Campbell to Hart' (June 20, 1889), Letter A-163/593 in *Archives of China's Imperial Maritime Customs: Confidential Correspondence between Robert Hart and James Duncan Campbell, 1874-1907*, Vol. 2, Xiafei Chen and Rongfang Han, eds., (Beijing: Foreign Languages Press, 1990-1993), p. 204.
[439] Tyne and Wear Archives, 31-5080

would certainly be a very economic force, yet supposedly it would be able to meet the mission requirements of coastal defence (the scenario that Armstrong and Rendel envisioned had never take place). Taking advantage of his good relations with the Imperial Court, Hart lobbied for the two types of Rendel ships and achieved remarkable successes. A total number of eleven Rendel gunboats and two Rendel ram cruisers were bought under the recommendation of Hart in the second half of the 1870s (see Table 5.3).

	Name	Date of Commission
1st batch	Long Xiang (龙骧)	Commissioned into the Beiyang Fleet Nov. 1876 and transferred to the Nanyang Fleet Nov.1879
	Hu Wei (虎威)	
	Fei Ting (飞霆)	
	Che Dian (掣电)	
2nd batch	Zhen Bei (镇北)	Commissioned into the Beiyang Fleet Nov. 1879
	Zhen Nan (镇南)	
	Zhen Dong (镇东)	
	Zhen Xi (镇西)	
3rd batch	Zhen Zhong (镇中)	Delivered to the Shandong provincial government in Aug. 1881 and were later transferred to the Beiyang Fleet
	Zhen Bian (镇边)	
	Hai Jing Qing (海镜清)	The Guangdong Fleet Aug. 1881

Table 5.3 A list of the Rendel Gunboats acquired via Robert Hart in three batches. [440]

With the eleven gunboats and two ram cruisers delivered, Hart proposed to the Imperial Court in 1879 the establishment of a national agency of maritime defence. As a part of the proposal Hart himself would be installed as the inspector-general of the agency. The original proposal is missing from historical

[440] Wang, *Li Hongzhang and the Beiyang Fleet*, p. 132.

archives, which makes it impossible to know in detail about Hart's blueprint. But from comments made by some contemporary Chinese officials involved in this event it can be learnt that Hart's new title would give him considerable authority over all regional fleets.[441] With the benefit of hindsight, we know that Hart was not as ambitious as his predecessor Lay, whose plan of the Lay-Osborn Flotilla was driven by a mixed motivation of reinforcing the imperial government and aggrandizing himself. Hart on the other hand had always been preoccupied with strengthening the Chinese central government. This proposal should be no exception. Officials in the Imperial Court applauded the proposal, they made a few amendments to it and intended to authorise it.[442]

Unsurprisingly, local leaders objected Hart's proposal. The strongest objection came from Li Hongzhang, who was then governor-general of Zhili province, Beiyang Superintendent and patron of the Beiyang Fleet. Li understood that the title of inspector-general of a national maritime defence agency would institutionalise Hart's influence on naval issues, which meant that power would be wrested away from local leaders. Li reminded the Imperial Court that Hart should not have too much power; otherwise he would be too difficult to work in harness with. Li suggested that Hart should choose one from the two titles: either inspector-general of the Imperial Maritime Customs Service, which he had been carrying since 1863, or inspector-general of the national maritime defence agency, which he suggested in his proposal to the Imperial Court.[443] Hart picked the former and was consequently excluded from naval affairs. He was the one of the few people in the Imperial Court who was enthusiastic about and really understood a modern steam navy. Now that he was excluded from naval affairs, the Imperial Court could not find a replacement for him. The proposed national maritime defence agency was not established.

The Imperial Court lost again against local leaders in the tug-of-war for the control of the steam navy. An Imperial Edict in late 1879 gave Li Hongzhang – the then strongest local leader – the power to conduct acquisitions on behalf of all regional maritime defence agencies along the Chinese coast.[444] Yet Li could only

441 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty*, Vol. 2, pp. 1000-1002.
442 LWZGQJ-YSHG, Vol. 9, pp. 37-38.
443 LWZGQJ-YSHG, Vol. 9, pp. 37-39.
444 YWYD, Vol. 2, p. 427. DZSL, Vol. 103, p. 11.

exercise little influence on other provincial leaders, because after all he was a local leader himself. He was given the title of vice minister of the Chinese Board of Admiralty – the *Haijun Yamen* in 1885, but the institution had little real power (see section 6.3). The authority of acquisition remained in the hands of local leaders. The Nanyang Fleet ordered two cruisers from the German shipbuilder Howaldt in the mid-1880s, the Guangdong Fleet ordered two Vulcan and nine Schichau torpedo boats on the eve of the Sino-French War. The lack of homogeneity among the various regional fleets was not improved.

Although Li Hongzhang was not able to influence the naval acquisitions of other regional fleets, at least he was now empowered to buy ships for his own Beiyang Fleet – the elite fleet of Chinese steam navy – as he pleased. Different from Hart who had been calling for Rendel gunboats, Li was a champion of ironclad battleships. He embarked on equipping the Beiyang Fleet with ironclads as soon as he was empowered to do so. A chronological review of the ships that China acquired from abroad in the second half of the 1870s and the first half of the 1880s showed a sudden shift from small-sized coastal defence gunboats to ironclad battleships. Before Hart lost influence on naval acquisition, the Beiyang fleet was evolving towards a costal defence force featuring Rendel gunboats and ram cruisers. After Li seized control of naval acquisition, the Beiyang Fleet began to evolve towards a navy of ironclad battleships.

But Li's pursuit of ironclad battleships was not motivated by a Mahanian intention of decisive battles and command of the sea. Instead, he was largely motivated by a worship of armour and firepower. His naval thinking was one-sided and less systematic. Moreover, unlike Hart who was connected to and advised by the best naval architects in London via Campbell, Li '*knew nothing of comparative merits or virtues of navy of these marvellous appliance of modern war*' and was surrounded by weapon makers and arm dealers from all over the Western world.[445] All tried to sell him weapons and many were willing to make changes to the original design the way Li pleased. Li was given a much greater variety of choices and he was, to an extent, spoiled by these choices. In 1886, the

[445] Holcombe, *The Real Chinese Question*, p. 134. Chester Holcombe also noted that the foreign arm dealers 'bribed [Li Hongzhang's] clerks and doorkeepers. They interviewed his cook and flattered his barber. They sought consular and even diplomatic assistance. They expended money, in the more delicate way, by making costly presents, and in the more direct and grosser form of bribery'. Ibid.

coastal batteries under Li's command had a motley collection of guns that required eighty-four different kinds of projectiles.[446] The ships he bought had the same problem. The Beiyang Fleet, the chief fleet of Chinese steam navy suffered from a considerable lack of homogeneity after Li took charge of the acquisitions.

In the early 1880s, Li bought two ironclad battleships from Germany – the *Ding Yuan* and her sister ships *Zhen Yuan*. The *Ding Yuan* class was a copy of the British battleship HMS *Inflexible* and cost 1.63 million *taels* each.[447] Li was very proud of this pair of ironclads and wanted to order more, but he soon realised that the Qing Empire's finance was too weak to afford a large number of such ships. After the two ironclads, Li turned to buy cruisers instead. This was primarily because cruisers were much cheaper than ironclads and had no less impressive firepower. In the 1880s, Li bought a total number of five cruisers from Britain and Germany. These included the German-built protected cruiser *Ji Yuan*, the British-built protected cruiser *Zhi Yuan* and her sister ship *Jìng Yuan*, the German-built armoured cruiser *Jīng Yuan* (not to be confused with protected cruiser *Jìng Yuan*), and her sister ship *Lai Yuan*.[448] These five cruisers totalled a displacement of 12,700 tons. Numerically speaking, these ships, in combination with the two 7600-ton ironclad battleships made the Beiyang Fleet a rather considerable force in terms of displacement.

But Li was blinded by his worship of armour and firepower to such an extent that he overlooked the key differences between ironclads battleships and cruisers. The two types of ships were designed to undertake different tasks. Ironclad battleships were very expensive ships. They were designed for decisive battles to secure command of the sea. For this reasons they usually featured good protection and strong firepower. Cruisers were usually comparatively cheaper and they were designed to protect sea-lanes of communication and overseas interests. They were supposed to have a faster cruising speed and a

446 LWZGQJ-ZG, Vol. 57, pp. 11-14.
447 LWZGQJ-ZG, Vol. 55, pp. 16-18; Vol. 56, p. 18.
448 Protected cruiser and armoured cruisers: protected cruiser was a type of cruiser of the late 19th century, so known because they usually featured an armoured deck that offered protection for vital machines from explosive and armour piercing rounds. Protected cruisers were an alternative to armoured cruisers, which usually featured armour belts along the sides. The former were usually characterised by higher speed, while the latter offered better protection.

longer operational range. Both types of ships had their shortcomings: the ironclad battleships' protection came at the expense of speed, whereas the manoeuvrability of cruisers usually came at the cost of armour protection. It was hard to strike a balance between ironclad battleships and cruisers.

Failing to realise the differences, Li was inclined to believe that ironclads were the best warships and that cruisers were only second rate.[449] Although he was buying cruisers, he wanted the cruisers he bought to be cheaper substitutes for ironclads. For example, Li asked the British shipbuilder Armstrong Whitworth & Co. Ltd., who was building protected cruisers for his Beiyang Fleet to add an eight to ten inch thick water belt armour to the *Zhi Yuan* class protected cruiser. Naval architects of the Armstrong Company refused to make such changes and explained via the Chinese minister in London that it would be impossible to strike a balance between armour protection and speed.[450] Comparing with the British-built cruisers, Li was more satisfied with the German-built armoured cruiser *Jing Yuan* and her sister ship *Lai Yuan*, primarily because they were better armoured. There were extolled as, in Li's words, 'small-sized ironclads'. But the armour protection came at the expense of speed. The two German-built armoured cruiser *Jing Yuan* and *Lai Yuan* had a top speed of 15.5kts and 15.75kts respectively, while the two British-built protected cruisers featured a top speed of 18.5kts.[451]

The British-built and German-built cruisers were also different in the way their main armament would be best employed in combat. The British-built *Zhi Yuan* class had its two 8.2in main gun mounted on the bow and stern, and two Armstrong 6in quick-firing guns mounted on the sponsons on each side of the ship. From a tactical perspective, this configuration of armament favoured a use of the ship in a line ahead formation, one that could maximise the ship's strong broadside fire (see Photo 5.10). The German-built *Jing Yuan* class, in contrast, had its two 8.2in main guns mounted on the bow and there were another two 5.9in guns mounted on the sponsons on each side. This meant that the ship could concentrate all its firepower when firing end-on at the target, therefore it was better suited for a line abreast tactical formation (see Photo 5.11).

---

449 GXCZRJSSL, Vol. 14, p. 5.
450 LHZQJ-DG, Vol. 1, pp. 563-570. YWYD, Vol.3, pp.371-374
451 Wright, *The Chinese Steam Navy*, p. 73.

Li Hongzhang's neglect of the abovementioned differences and his single-minded pursuit of armour and firepower had led to a fleet of a highly heterogeneous warships. By the outbreak of the First Sino-Japanese War, the Beiyang fleet had ten capital ships in total. Two were the ironclad battleships *Ding Yuan* and *Zhen Yuan*. Among the five cruisers three were German-built – the protected cruiser *Ji Yuan*, and the armoured cruisers *Jīng Yuan* and *Lai Yuan.* Two were British-built – the protected cruiser *Zhi Yuan* and her sister ship *Jìng Yuan*. The *Ji Yuan* was one of Germany's first attempts at a protected cruiser and was considered as an unsuccessful ship. The two German-built armoured cruiser *Jing Yuan* and *Lai Yuan* featured good armour protection but their speed was comparatively lower and they were designed for line abreast formation. The two British-built protected cruisers featured high speed but low protection, suitable for line ahead tactical formation. In addition, there were the two Rendel ram cruisers *Chao Yong* and *Yang Wei*, which were supposed to be used in complement to Rendel gunboats. Lastly, there was the Fuzhou Built coast defence gunboat *Ping Yuan*, which was a copy of the French coastal defence gunboat *Achéron* (see Photo 5.5).

The lack of homogeneity was considered to be a key reason for the Beiyang Fleet's defeat in the Battle of Yalu. R. Hill observed that in the battle the fleet chose a tactical formation that was reminiscent of Adm. Tegetthoff's at the 1866 Battle of Lissa and what appears to have been the same tactics of relying on the ram.[452] However, due to the heterogeneity of the ships, the fleet moved very slowly when it steamed towards the Japanese Combined fleet (the speed of a fleet is that of the slowest ship).[453] By the time it reached close range, many of the ships had already been heavily damaged, especially the unarmoured ships, which were supposed to offset their inferior armour protection by high speed. Four out of the five Chinese ships that sunk in the battle were unarmoured ships. A statistical analysis after the battle showed that the ships that survived had

[452] Hill, *War At Sea In The Ironclad Age*, p. 199.

[453] Some account said the Beiyang Fleet moved at a speed as low as 7kts. Yue Chen, '甲午黄海大东沟海战北洋海军阵型考 Jiawu Huanghai Dadonggou Haizhan Beiyang Haijun Zhenxing Kao [An Examination on the Beiyang Fleet's Battle Formation during the Battle of Yalu]' in *北洋海军新探：北洋海军成军 120 周年国际学术研讨会论文集 Beiyang Haijun Xintan: Beiyang Haijun Chengjun 120 Zhounian Guoji Xueshu Yantaohui Lunwenji [Beiyang Navy Revisited: A Collection of Theses Presented at the International Symposium Commemorating the 120th Anniversary of the Beiyang Navy's Establishment]*, Junjie Qi and Yang Guo eds., (Beijing: Zhonghua Shuju, 2012), p. 706.

taken a staggering number of direct hits: the ironclad battleship *Ding Yuan* 159, her sister ship *Zhen Yuan* 200, the armoured cruiser *Lai Yuan* 225, and the protected cruiser *Jing Yuan* 110.[454] The low speed of the fleet caused by heterogeneity of the ships was considered as the main reason of the Beiyang Fleet's failure to apply ramming tactics.

5.4 Conclusion

As to the home-built ships, the opinion on what type of ship most suited China diverged. The Fuzhou Naval Yard had financial survival as its paramount concern; it built the 'dual-purpose ships' in the hope that the warships could earn their keep by serving as cargo ships in peacetime. However, these ships proved to be militarily inadequate in the Battle of Fuzhou of the Sino-French War, as the cargo capabilities of these ships severely compromised their military values. Admirers of Western naval power like Ding Richang argued from a purely military viewpoint that China should build larger and mightier warships. They claimed that only warships as powerful as those of the West could safeguard China. But they neglected that Western naval power was backed by a type of economy different from that of China, and China lacked the same level of financial strength to uphold expensive Western-style warships. Those who called for littoral/riverine gunboats suggested a type of ship that conformed with the traditional Chinese military *modus operandi* of coastal and riverine warfare. But the realisation of their ideas was rendered impossible by provincial leaders who pursued local interests as top priority. The underlying problem that caused the failure of home-built ships was the political structure of the Qing Empire. Under its premise, it was impossible for naval modernisers to take the overall situation into consideration. Notwithstanding that each school of thinking had its own sound reasons, none could strike a balance between the mission of the navy and the political and economic realities of China.

---

[454] Ma, *A New Examination of the History of Modern Chinese Navies*, p. 80. Apart from the Chinese fleet's low speed, another key reason that thwarted the Beiyang Fleet's application of ramming tactics was that the Japanese ships were equipped with a large number of quick firing guns. A research shows that the Japanese Fleet was equipped with sixty-six quick firing guns, while the Chinese had only two. Hill, *War At Sea In The Ironclad Age*, p. 199.

Financial difficulties impeded the development of Chinese indigenous shipbuilding capabilities. First, China lacked and refused to establish a Western-style financial infrastructure to raise funds for the cause of naval modernisation. The shipbuilding centres operated on fixed amount of allocations. The funds were not enough for the shipbuilding plants to reinvest in new machineries, which made it difficult for them to keep abreast with the latest developments of naval technology. Second, the strong government control of the shipbuilding centres meant that they operated in the fashion of bureaucratic bodies rather than commercial enterprises. The conservative inclination of the bureaucrats and the principles of command economy that they observed further lowered the innovative capabilities of the Chinese indigenous shipbuilding industries. Third, the provincialism that characterised the political landscape of the Qing Dynasty resulted in cutthroat competitions between the various regional maritime defence agencies. They severely damaged the reputation of the Fuzhou Navy Yard – the main Chinese shipbuilding centre – and that of the native naval architects. As a result of the decline of Chinese shipbuilding industries, acquisition from abroad replaced building at home in becoming the main source of ships of the Chinese steam navy.

A tug-of-war between central and local governments affected the projects of overseas naval acquisition. The former wanted to buy a centralised naval force from abroad, as most of the military industries were in the hands of the local authorities. The latter, however, strived to retain control of naval modernisation for the sake of local interests. In late 19th century when the local authorities had an upper hand in the power struggle against the Imperial Court, achieving naval centralisation was difficult. In the early 1860s, the Imperial Court attempted to establish a central navy through buying a flotilla via the Imperial Maritime Customs Services, but the project was thwarted due to the objection of the then most powerful local leader Zeng Guofan, who wanted to bring the flotilla under his control. In the late 1870s, the Imperial Court's planned the building of a centralised coastal defence navy via Robert Hart but the then most powerful local leader Li Hongzhang disagreed. Naval acquisition remained a local business. In the absence of a clear strategy of naval acquisition, Li's acquisition policy for his Beiyang Fleet – the elite unit of the Chinese steam navy – lacked consistency,

the resulting heterogeneity of ships contributed to the fleet's defeat in the First Sino-Japanese War.

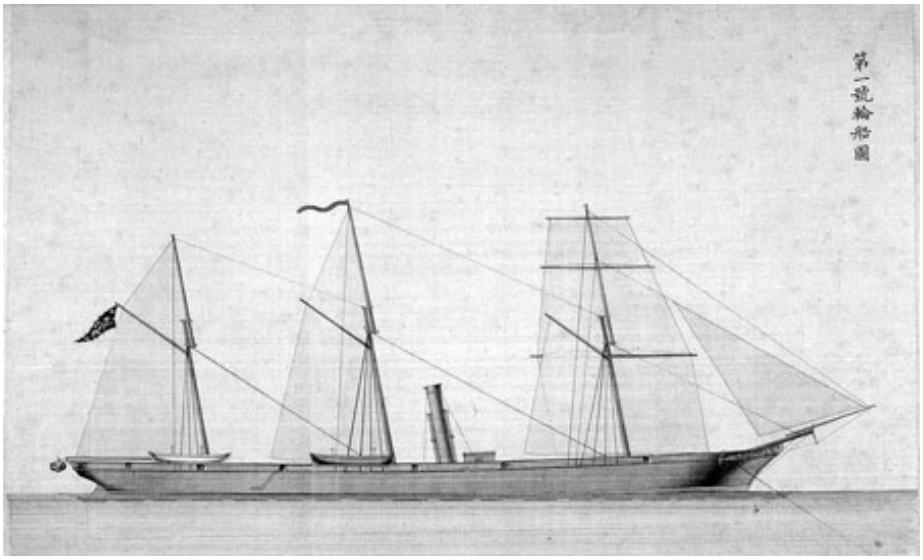


Photo 5.1 The *Wan Nian Qing* was the first ship built by the Fuzhou Navy Yard in the late 1860s that embodied the idea of 'dual-purpose ships'. Twelve ships of this class were built from 1868 to 1876. To a great extent also the *Wei Yuan* class composite ships (wooden-hulled with iron ribs) built after 1876 embodied the idea of 'dual-purpose ships'.

Photo 5.2 Cruiser *Yang Wu*, the only real military vessel built by the Fuzhou Navy Yard in the 1870s. It was equipped with twenty-three naval guns but it had a very low cargo potential. None of the coastal provinces adopted the *Yang Wu*. It remained in the Fuzhou Navy Yard and was later used a training vessel.

Photo 5.3 The *Hai An* (or *Yu Yuan*).[455] It was built by the Jiangnan Arsenal in the early 1870s. In spite of its relatively high military value, this ship was too expensive to build and maintain for China. (source: The Chinese Steam Navy, p. 37)

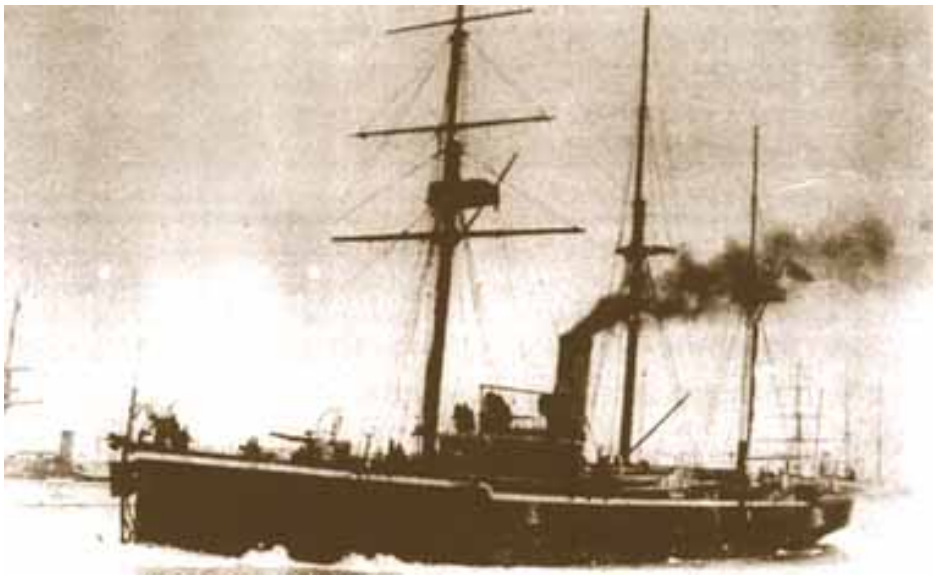


Photo 5.4 The cruiser B*ao Min*. Launched in 1885, the cruiser *Bao Min* was the last ship built in the Jiangnan Arsenal in the Self-Strengthening period. It was originally intended as a littoral/riverine gunboat, but the ship failed to embody this idea. (source: The Chinese Steam Navy, p.67)

[455] The Japanese legend of this picture reads ‘Chinese warship Yang Wei’, which is a mistake. Judging from the number of gun ports, the ship could either be the *Hai An* or her sister ship *Yu Yuan* of the Hai An class warships.

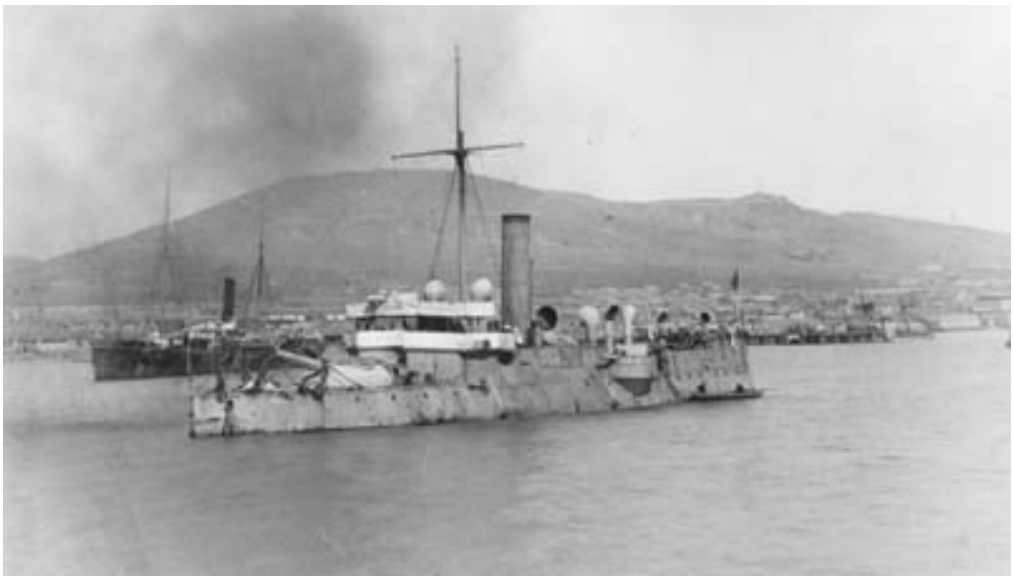


Photo 5.5 The coastal defence gunboat *Ping Yuan* was a copy of the French coastal defence gunboat *Acheron.* It was one of the most advanced ships built by the Fuzhou Navy Yard before the First Sino-Japanese War.

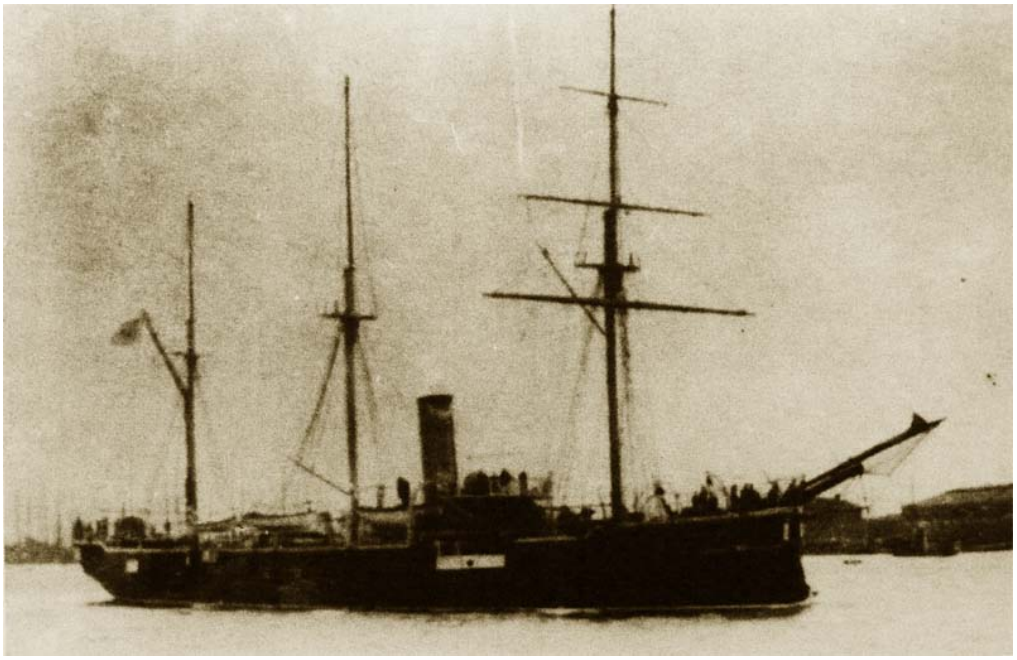


Photo 5.6 The cruiser *Kai Ji*. It was a copy of French cruiser *Duguay-Trouin*, one of the most sophisticated ships built by the Fuzhou Navy Yard during the Self-Strengthening period. (source: Wright, *The Chinese Steam Navy*, p. 56.)

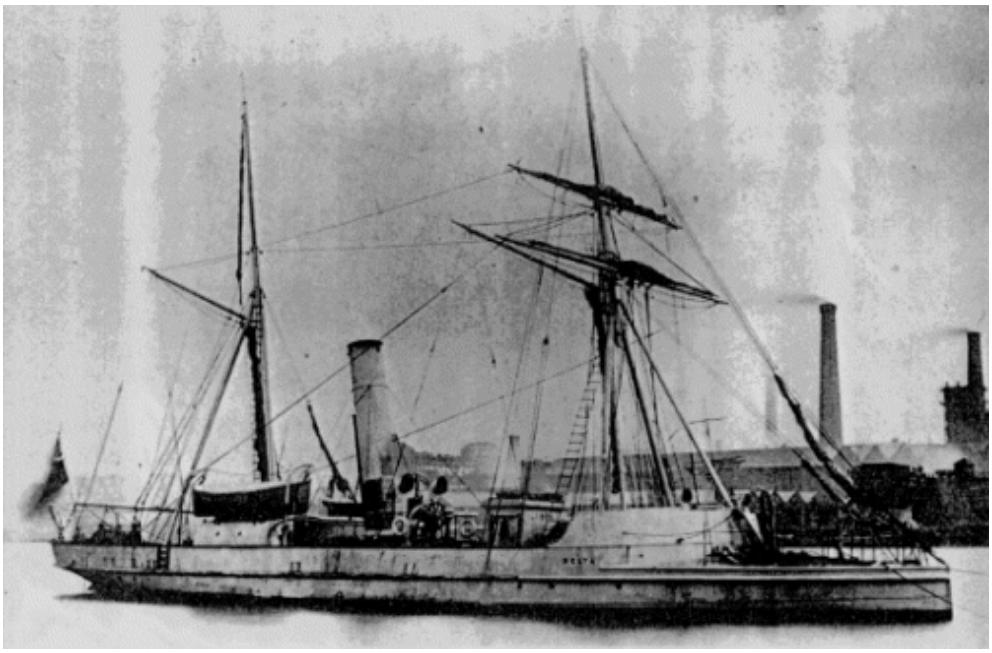


Photo 5.7 Rendel gunboat *Delta* (later renamed *Che Dian*) upon completion, the other ten Rendel gunboats that Hart bought in the late 1870s were virtually of the same design (source: Wright, *The Chinese Steam Navy*, p. 45.).

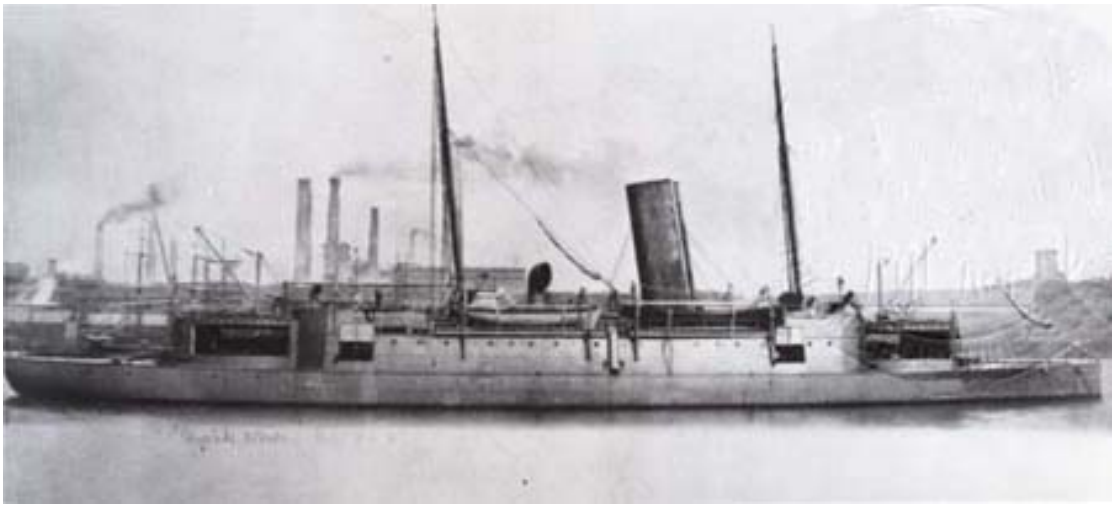
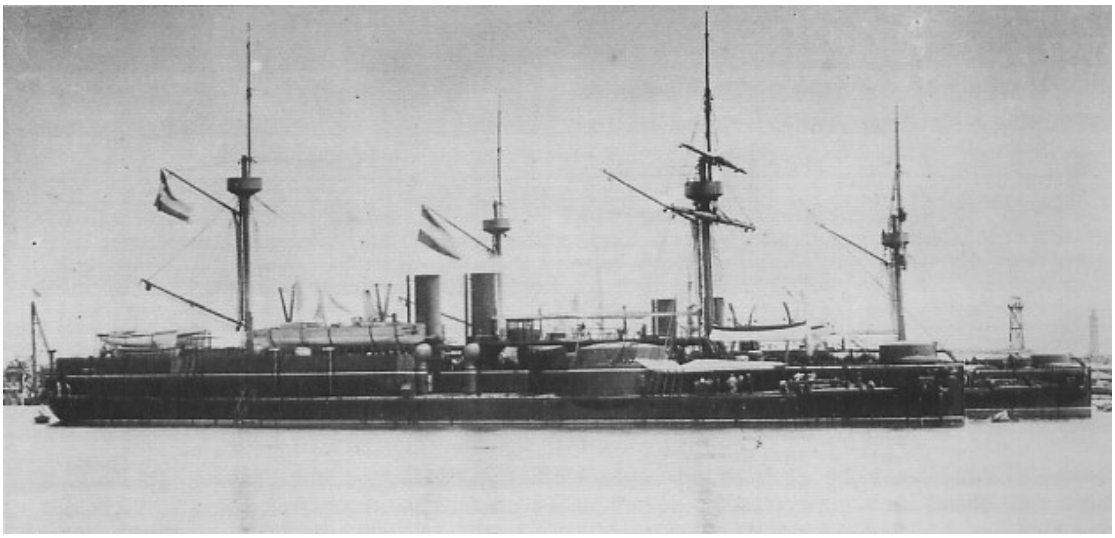


Photo 5.8 Rendel ram cruiser *Yang Wei* upon completion. Both the *Chao Yong* and her sister ship *Yang Wei* were sunk in the Battle of Yalu (source: Wright, The Chinese Steam Navy, p. 47.).



Displacement	7144 tons designed, 7670 tons full load
Dimensions (ft)	308 oa, 298.5 pp × 60 × 20
Machinery	Reciprocating 8-cyl. boilers, 2-shaft, 3-cyl. Horizontal trunk engines. Trials. Ding Yuan 6200 IHP = 14.5 knots (Ding Yuan); 7200 IHP = 15.4 knots (Zhen Yuan)
Coal & Radius	700 tons normal, 1000 tons max. 4500 nm at 10 knots
Armour	Citadel 14in; barbettes 12in; Conning Tower 8in; deck 3in; turrets 3in
Complement	363
Builder	Vulcan, Stettin Ding Yuan: laid down 31 Mar 1881, launched 28 Dec 1881, trials 2 May 1883 Zhen Yuan: laid down Mar 1882, launched 28 Nov 1882, trials Mar 1884

Photo 5.9 Ironclad Battleship *Ding Yuan* and its technical details. *Ding Yuan* – the flagship of the Beiyang Fleet – and her sister ship *Zhen Yuan* were the largest ships of the Chinese steam navy of the Self-Strengthening period. (source: Wright, *The Chinese Steam Navy*, p. 65.)

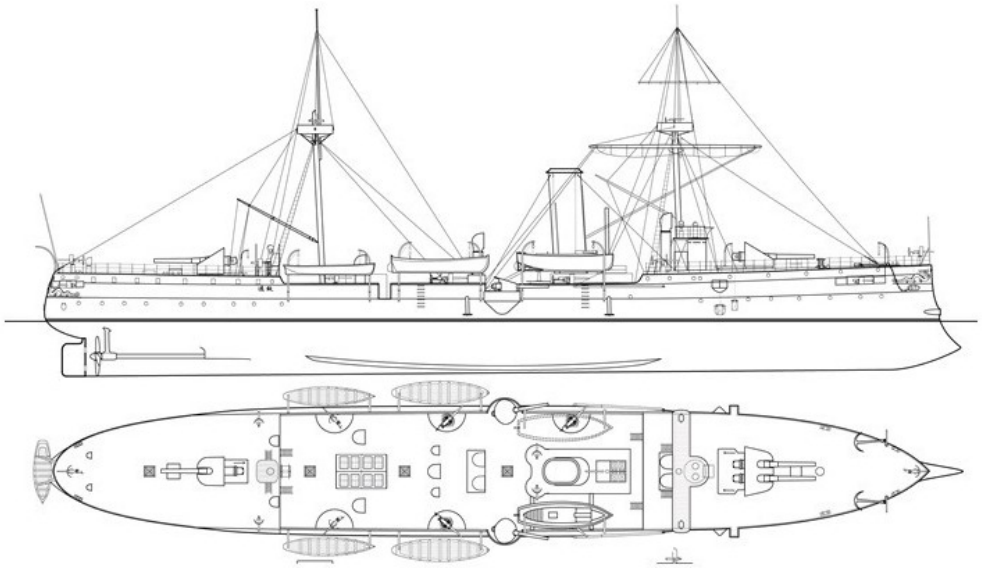


Photo 5.10 The *Zhi Yuan* class protected cruiser. Its configuration of armament favoured a line ahead tactical formation.

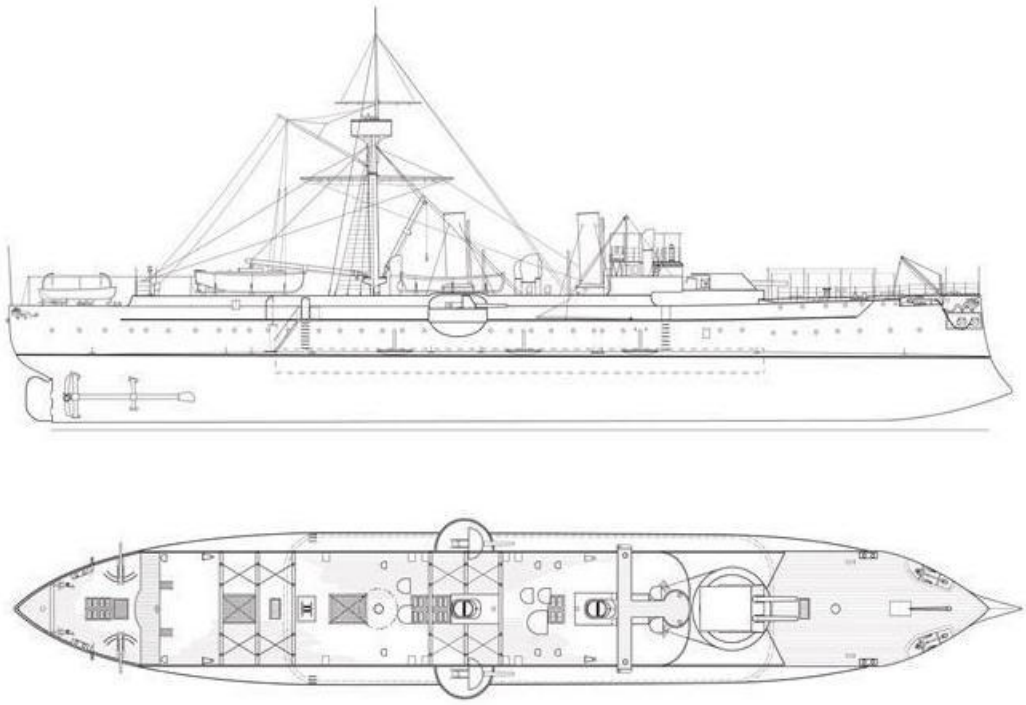


Photo 5.11 The *Jing Yuan* class armoured cruiser. Its configuration of armament favoured a line abreast tactical formation.

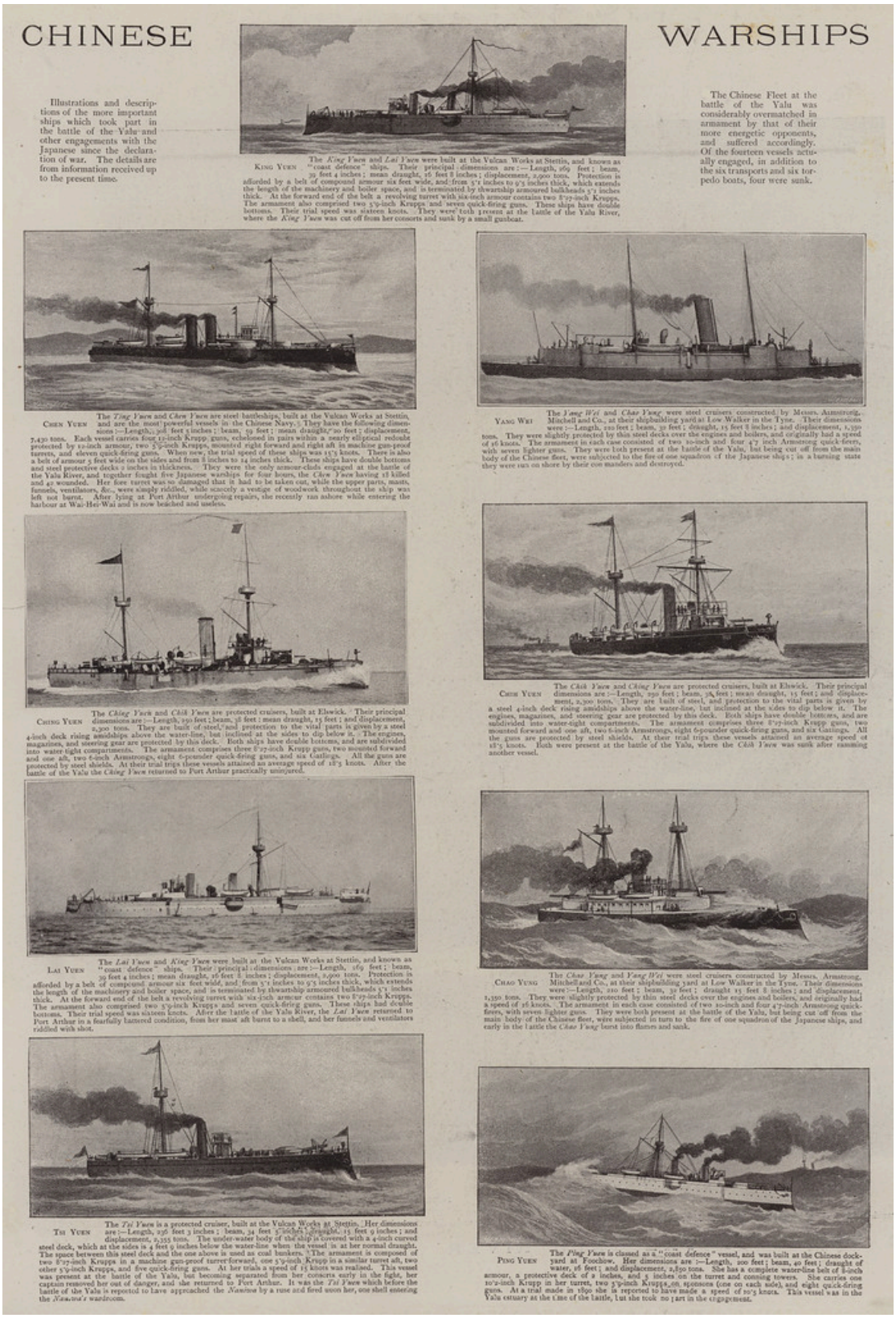


Photo 5.12 Some capital ships of the Beiyang Fleet that took part in the Battle of Yalu. It can be seen in the pictures that the ships of the Beiyang Fleet were highly heterogeneous in their features. (Source: *The Graphic*, 1st Dec. 1894)

Chapter Six

The Use of the Naval Force

This chapter will focus on three aspects: (1) Chinese military traditions and their influences on the use of naval power; (2) the formation of the four regional fleets and the subsequent defeat of the fleet of the Fuzhou Navy Yard during the Sino-French War; and (3) the establishment of the Chinese Board of Admiralty – the *Haijun Yamen* – and the defeat of the Beiyang Fleet in the First Sino-Japanese War. It will try to explain how the Qing Empire's 'fundamental structure' informed China's use of naval power, and how it affected the efficiency of the coordination between the various regional fleets. A navy is an instrument of the state; its mission and the way in which it is used is determined by the nation's goals, perceived threats and practical experiences. Yet as a state institution, the navy's organisational structure and command system has to be in conformity with the political framework of the state, which is in turn determined by the dynamics between various power centres.

6.1 The Chinese Military Traditions and Their Influences on the Use of Naval Power

During the Self-Strengthening period, the steam navy was brought under the overarching term of *maritime defence*. This implied that the Chinese steam navy was regarded as a means to the end of maritime defence. However, the

Self-Strengtheners who built the steam navy did not provide a clear explanation of how they intended to use the navy for that purpose and there was no clearly formulated maritime strategy. Therefore the navy was used largely in conformity with traditional Chinese military *modus operandi,* which was largely based on a concept of defence through fixed fortifications. This stems from the fact that throughout Chinese history the most menacing external threat had been the incursions of nomadic peoples from the northern (including the Manchus themselves). Although usually not large in number, the tactics of these mounted raiders featured high mobility and concentration of force. These the often more numerous Chinese infantry found difficult to defend against, especially in terrain lacking in defensive features. To tackle such threats, fortresses were usually built along the borders of agrarian areas to ward off the aggressors. The Great Wall, which was built and improved continuously throughout Chinese history since the Qin Dynasty (221-206 BC), was the concept of such fortresses writ large.[456]

Fortress warfare was also commonly seen in Chinese domestic wars. A majority of the domestic wars in Chinese history revolved around the capture and defence of agricultural resources. In this context, 'strengthen the walls and clear the fields' – consolidating one's defences while applying scorched earth tactics was a frequently applied strategy.[457] Thick walls were built around cities and towns so that when attackers came, the defending side could concentrate the most valuable strategic resources of an agrarian economy – manpower and food – inside the walls. Attacking walled cities by direct assault was considered a risky and potentially costly action for the attacking side. The most renowned Chinese military classic – *The Art of War* – said: '*when troops attack cities, their strength will be exhausted*' and '*the worst policy is to attack* [walled] *cities. Attack* [walled] *cities only when there is no alternative*.'[458] In short, fortress warfare and static defence was rooted in the feudal-agrarian economy and was commonly practiced

[456] As to the relations between the Great Wall and the agrarian economy, Ray Huang observed: '*the traditional line of defence that China erected along the steppe land, customarily referred to as the "Great Wall", was by no means fixed, It moved back and forth, yet never too far away from the "15-inch isohyet line". That is to say, the territories north and west of the Great Wall, having an annual rainfall of less than fifteen inches and therefore inadequate for cultivation, remained a grazing ground for the nomads.* ' Ray Huang, *Broadening the Horizons of Chinese History: Discourses, Syntheses, and Comparisons*, (Armonk, NY: M. E. Sharpe, Inc., 1999), p. 29.

[457] '坚壁清野'

[458] Tzu Sun, *The Art of War*, Samuel B. Griffith tran., (Oxford: Oxford University Press, 1971), p. 73, 78.

in Chinese warfare.

Such military thinking did not fade away during subsequent Chinese dynasties. On the contrary, it was developed further and became a key military doctrine of the Qing armed forces in the domestic wars of the 19th century. E. Wang observed that mid-19th century Chinese warfare was characterised by stationary rather than mobile warfare. Zeng Guofan, the most prominent military commander of the Qing Empire in the 19th century, summarised his operational doctrine as '*building hardened fortifications to fight static war.*'[459] Augustus F. Lindley, an ex-British Royal Navy officer who joined the Taiping Rebellion as a military advisor, provided a vivid depiction of Zeng's application of fortress warfare:

> '[Zeng's army built] *themselves in with a formidable series of earth-works and stockades, from which they could neither climb out nor enemies climb in. As a rule, the Chinese never fight unless they are obliged to. Not that they are so cowardly as some Europeans have mistakenly seemed to have believe, but rather from those singularly refined traits of reasoning which, with these peculiar people, border closely upon the absurd.*'[460]

As this extract implied, such military practice had its accompanying logic, which Zeng summarised as the dichotomy of '*master-guest*': with the *master* in a military campaign being the side that held stationary defence, whereas the *guest* was the one that relied on attacks through movement. Zeng believed that the *master* always had a greater chance of winning than the *guest*. Such a theory had its origins in Chinese military traditions. With respect to offense and defence, *The Art of War* states that '*invincibility lies in the defence.*'[461] The doctrine of passive defence was deeply rooted in Chinese economic realities and was commonly practiced by Chinese military commanders as a result.

The extent to which this military thinking had influenced China's use of naval power was reflected by the popularity of the book *A Treatise on Coast-Defence*

---

459 Luo, *A History of the Hunan Army*, pp. 167-169.
460 Augustus F. Lindley, *Ti-ping Tien-kwoh: The History of the Ti-ping Revolution*. (London: Day & Son Ltd., 1866), Vol. 1, p. 346.
461 Sun, *The Art of War*, p. 85.

among the officials involved in China's maritime defence. The book was first published in London in 1868 and was translated by the translation bureau of the Jiangnan Arsenal in the early 1870s. The author of the book, Viktor E.K.R. von Scheliha was a Prussian subject who served as an army – rather than navy – officer and engineer in the Department of the Gulf of Mexico of the late Confederate States of America. The preface of the book reads:

> '*The following treatise presents chiefly the results of the Author's experience and observation in Coast-defence during the four years of the late war in North America. … The work is mainly intended to set forth the principles of Coast-defence as they had developed themselves at the close of the American war*'.[462]

The book had two parts. The first part was titled '*the progress made in naval architecture and in artillery necessitates a modification of the principles heretofore observed in coast-defence*'. In this part, the author covered in detail a wide range of technical issues relating to the construction and wartime use of coastal fortifications. The second part of the book focused on three topics, namely, 'obstruction', 'torpedoes' (naval mines), and 'methods for lighting-up channels'.[463]

A key reason behind the popularity of *A Treatise on Coast-Defence* in China was that it to a great extent conformed to existing Chinese military practice. As an army officer in charge of coastal defence, von Scheliha studied maritime warfare from the same perspective as the Chinese officials in charge of maritime defence. Both were defending an agrarian economy, and both viewed preventing enemy ships from breaking through coastal defences as their primary aim. The book was widely read and cited by Chinese officials involved in maritime defence. In contrast, other books that focused on naval warfare introduced to China at roughly the same time did not draw the same amount of attention. In particular, an Austrian book named *Haizhan Xinyi* (the origins of the original book are unclear, the Chinese name can be translated literally as *A New Treatise on Sea*

[462] Von Scheliha, *A Treatise on Coast-Defence,* (London: E & F. N. Spon, 1868), p. vi.
[463] See the table of contents of Von Scheliha's *A Treatise on Coast-Defence*.

Battles) that stressed the importance of command of the sea and sea-lanes of communication in maritime warfare, was largely ignored.[464]

What the Chinese readers took away from their reading of *A Treatise on Coast-Defence* can be seen in the frequency the book was cited by officials responsible for maritime defence in their memorials to the Throne. Among them were Li Hongzhang, then governor of Zhili province; Li Zongxi, then governor-general of Liangjiang; Liu Kunyi, then governor of Jiangxi province; Ding Baozhen, then governor of Shandong province.[465] Li Hongzhang, who wielded the strong influence on China's maritime defence policies, reflected on his learning from the book in an 1874 memorial to the Throne:

> '*according to von Scheliha ...* [the most practical stratagem for China's coast defence] *is twofold. The first is stationary defence, which requires extraordinarily sturdy coastal fortifications and batteries that can withstand the shelling of enemy ships ... along with ironclads mounted with large guns, which are required to defend the waterways* [to prevent the enemy from breaking through]. *... The second is mobile warfare, which requires a large number of well-trained troops and large military vessels ... to prevent the enemy from landing* [on our coasts].'[466]

Two points can be distilled from how the Self-Strengtheners' reading of *A Treatise on Coast-Defence* influenced how they used the navy. First, the Chinese maritime defenders saw passive defence rather than offence as a means to the end of maritime security. The aim of maritime defence was to prevent the enemy from penetrating the line of defence and landing troops on the Chinese coast. Second, defensive capabilities, which comprised of coastal fortifications and ironclads, were regarded as the key to successful maritime defence. These two key points, broadly conformed to the traditional Chinese military *modus operandi*.

---

464 Mingyong Pi, '洋务运动时期引进西方海战理论情况述论 Yangwu Yundong Shiqi Yinjin Xifang Haizhan Lilun Qingkuang Shulun [The Introduction of Western Naval Warfare Doctrines during the Self-Strengthening Period]', *Military Historical Research*, Vol. 30, No. 1 (Spring 1994), pp. 89-97. Jiang, *Dragon Flags over the Navy*, p. 364.

465 Wang, *Coastal Defense in the Late Qing Dynasty*, p. 113.

466 CBYWSM-TZ, Vol. 99, pp. 20-21.

Despite the fact that the perspectives of the Chinese maritime defenders towards maritime strategy was in accordance with a landlocked Chinese military *modus operandi*, maritime warfare was very much different. As virtually all contemporary naval strategists agreed, contesting command of the sea – or at least preventing the enemy from using it, i.e. sea denial – is the central element of war at sea, even though the strategic aim was merely defensive. Adm. Cyprian Bridge explains that: '[the command of the sea] *enables the nation which possess it to attack its foes where it pleases and where they seem most vulnerable. At the same time it gives its possessor security against serious counter-attacks'.*[467] Many other naval strategists echoed this view, with Julian Corbett pointing out that in any circumstances it is impossible to establish defence without securing a working control of the sea by aggressive action against the enemy's fleet; and however strictly one's aim may be defensive, the most effective means of securing it would be by counter-attack.[468] Mahan also pointed out that the idea of defence involves two means: passive defence, and taking proactive action against the enemy. The former is meant to strengthen oneself and await attack, but the real object of defensive preparation should be best secured by the latter, which is attacking the enemy.[469] However, the idea of command of the sea and preventing the enemy from securing command of the sea was overshadowed by traditional Chinese military thinking.

As a result, the enshrining of passive defence in Chinese military doctrine and the lack of the notion of a command of the sea had serious consequences on China's use of naval power. A close examination of the two maritime wars that took place during the Self-Strengthening Movement, the Sino-French War (1884-1885) and the First Sino-Japanese War (1894-1895), illustrates this point.

In the Sino-French War, the Chinese steam navy's strategic aim was to ward off French aggressors and prevent them from landing on the mainland coast and Taiwan Island. A comparison of the two belligerent navies shows that the mid-1880s Chinese steam navy was inferior to the French Far East Squadron in terms of the quality of the ships.[470] Under these circumstances, the role of the

---

467 Cyprian Bridge, *Sea-power, and Other Studies*, (London: Smith, Elder & Co., 1910), p. 84.
468 Julian S. Corbett, *Some Principles of Maritime Strategy*, (London: Longmans, Green and Co., 1911), p. 29.
469 Mahan, *The Influence of Sea Power Upon History*, p.87.
470 Piotr Olender, *Sino-French Naval War: 1884-1885*, (Petersfield: Mushroom Model Publications, 2012), p.

Chinese navy should have been, according to the commonly-accepted principles of naval warfare, to prevent the French Far East Squadron from using the sea freely as a platform for power projection. However, a study of China's use of naval forces in the Sino-French War shows that the ships were used to build a 'fortress' between the French ships and the Chinese coast. The most illustrating case occurred when Chinese frontline commanders believed that the French was attempting to capture the city of Fuzhou, which was located to the northwest of the Fuzhou Navy Yard (the area indicated as 'Arsenal' in Map 6.1).[471] During the subsequent Battle of Fuzhou, the Chinese side deployed eleven ships in total, with the 1,560-ton wooden cruiser *Yang Wu*, and five 1,260-ton wooden gunboats constituting the main force.[472] Most of the Chinese capital ships were moored close to the south of the navy yard to act as stationary defence against landing French troops (see Map 6.1).

The consequences were predictably disastrous. The Fuzhou Navy Yard Fleet was virtually annihilated within one hour following the first exchange of fire. After the battle, China lost command of the sea that flanked its southern and south-eastern coasts which became completely open to French actions (see Map 6.2). In October 1884, the French fleet threw a blockade around the western coast of Taiwan and tried to cut it off from reinforcements and supplies from the mainland. The blockade produced considerable adverse impacts on the Chinese troops defending the island, though the French were not able to exploit the situation further due to an insufficient number of ships.[473] In March 1885, the French fleet initiated the Rice Blockade, which severely disrupted the transportation of rice by sea from the Yangtze Plain to northern China and forced the Chinese to carry it overland (the Grand Canal in the late 19th century was rarely in use because many parts of it was choked with silt).[474] With inevitable

---

45.

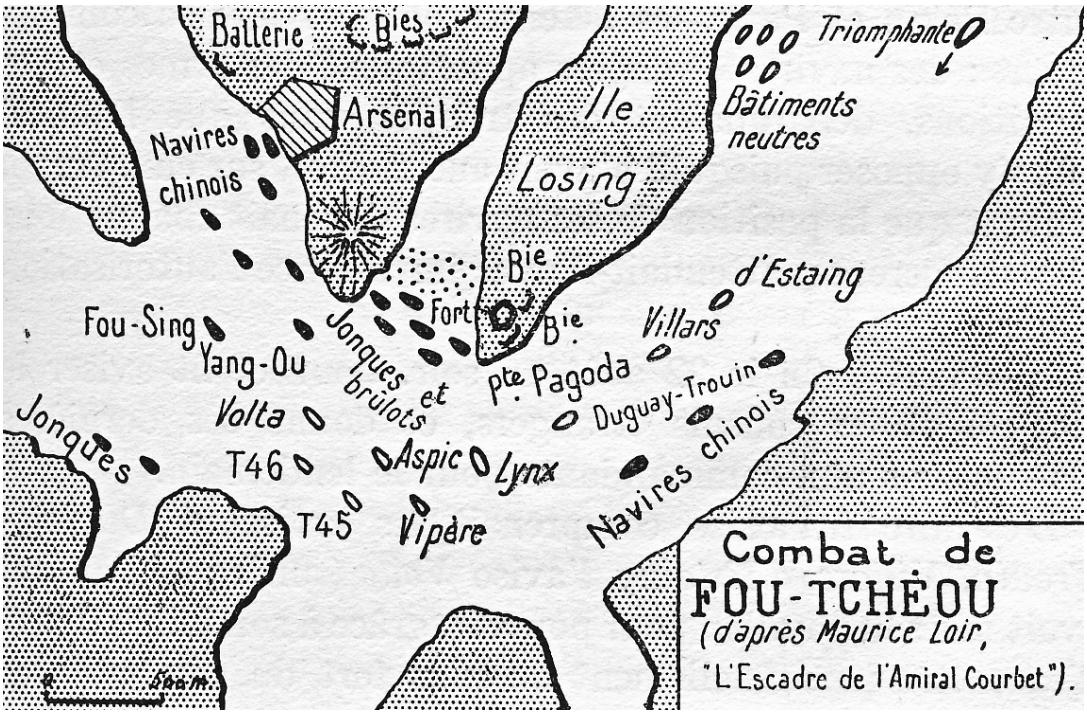
471 Jiang, *Dragon Flags over the Navy,* p. 177.

472 The *Yang Wu* was the training ship of the Fuzhou Naval Academy, and the five 'dual-purpose' ships took part in the Battle of Fuzhou were all of the *Wan Nian Qing* class. They had a displacement of 1,260 tons and were usually armed with around six guns. They were: *Yong Bao*, *Chen Hang, Fu Bo, Ji An* and *Fei Yun*. On the French side, there were: two 4,600-ton ironclads, *Triomphante* and *La Galissonnière*; one 3,500-ton armoured cruiser, *Duguay-Trouin*; two 2,400-ton cruisers, *Villars* and *d'Estaing*; one 1,800-ton cruiser, *Châteaurenault*; and one 1,300-ton cruiser, *Volta*. These ships were complemented by a number of gunboats, torpedo boats and transports.

473 Piotr Olender, *Sino-French Naval War,* pp. 72-76.

474 The other two naval battles of the Sino-French war were the Battle of Shipu (February 1885) and the

defeat in sight, the Qing government ended the war with the signing of the *Treaty of Tianjin* in June 1885.[475] The war crippled the Fuzhou Navy Yard Fleet, which never regained its former strength.



Map 6.1: The Battle of Fuzhou, 23rd August 1884. The Chinese highest frontline command, Zhang Peilun, lined up the ships between the French fleet and the Fuzhou Navy Yard (i.e. the Arsenal on the map) to prevent the French troops from landing. Most of the Chinese ships were sunk within one hour of the first exchange of fire.

In an Imperial Edict promulgated after the war, the Imperial Court attributed the defeat to the lack of powerful warships, a shortage of competent military commanders and the insufficiency of financial resources.[476] At the same time, a number of senior officials also presented their reflections on the cause of the

Battle of Zhenhai (March 1885). After the victory of the Battle of Fuzhou, the French Far East Fleet turned to Taiwan as its next target. The two battles took place when a detachment of five gunboats of the Nanyang Fleet was intercepted by the French on their way to reinforce Taiwan. As soon as the French were in sight, the detachment squadron of the Nanyang Fleet split into two groups. Two slow ships, *Cheng Qing* and *Yu Yuan*, retreated into the Shipu Bay, and were later sunk by the French (some historians claimed that the ships were scuttled by the Chinese crew themselves), Jiang, *Dragon Flags over the Navy*, p. 196. The other three faster ships sought shelter in Zhenhai Bay and eventually survived because the bay had better coastal batteries. The detached squadron of the Nanyang Fleet did not reach Taiwan.

475 Also known as the Treaty of Tientsin in English.

476 QMHJSL, p. 50.

defeat to the throne.[477] A number of them highlighted that the lack of coordination between the various regional fleets had rendered concentration of forces difficult. This realisation, in turn, contributed to the establishment of the Chinese Board of Admiralty – the *Haijun Yamen* (the lack of coordination between regional fleets and the establishment of the *Haijun Yamen* will be elaborated on later in this chapter). However, none of them questioned the way that China's naval power was used. The basic principles of command of the sea continued to be overlooked. The Chinese steam navy continued to be used as a 'fortress' that stood between the enemy ships and the objectives that the navy was tasked to safeguard. This way of using naval power embodied the military thinking crystallised from feudal-agrarian politico-economic realities and 19th century China's practice of fortress warfare, both of which was deeply entrenched and was difficult to change.

A review of the instructions that the Imperial Court and Li Hongzhang gave to the Beiyang Fleet during the First Sino-Japanese War shows that securing command of the sea or preventing the Japanese from doing so was never been given enough attention. There were three fleet engagements during the conflict: the Battle of Fengdao (25th July 1894), the Battle of Yalu (17th September 1894), and the Battle of Weihaiwei (20th January to 12th February 1895).[478] In none of these three battles were the Chinese fleet given orders to dispute the command of the sea with the Japanese Combined Fleet.[479] The first Chinese naval action took place on the 22nd July 1894 – three days before the Battle of Fengdao – when Li Hongzhang received an intelligence report warning that the Japanese Combined Fleet had sailed out from Sasebo. Li's reaction was to send ships to patrol Asan Bay, off the Korean Peninsula, to protect the transport ships

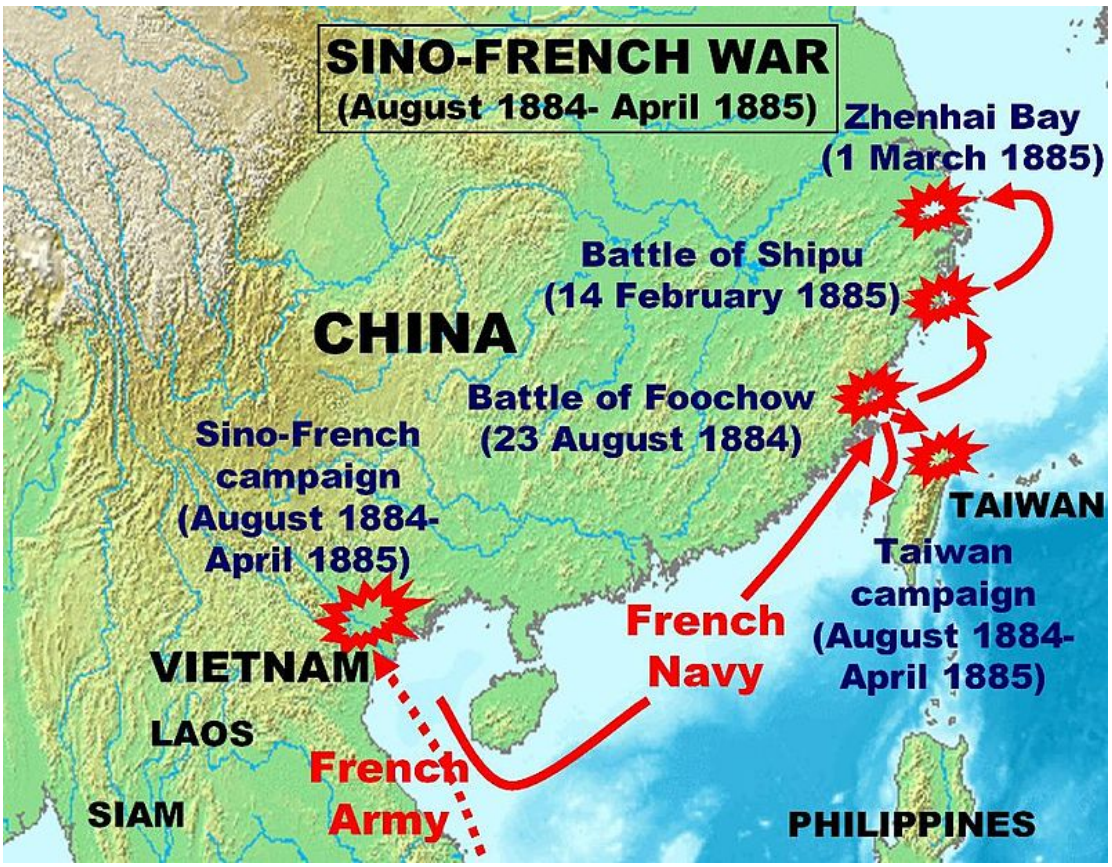
---

[477] Wang, *Coastal Defence in the Late Qing Dynasty*, pp. 207-209.

[478] The Battle of Fengdao was also known as the Battle of Pungdo

[479] The Imperial Japanese Navy Combined Fleet consisted of twelve ships. They were: the 4,150-ton protected cruiser *Yoshino*; the 3,650-ton protected cruisers *Naniwa* and *Takachiho*; the 3,150-ton protected cruiser *Akitsushima*; the 4,300-ton protected cruisers *Matsushima*, *Itsukushima* and *Hashidate*; the 3,700-ton ironclad *Fusō*; the 2400-ton cruiser *Chiyoda*; the 2,200-ton ironclad *Hiei*; the 600-ton gunboat *Akagi*; and armed merchantman *Saikyo Maru*. On the Chinese side, there were ten ships. They were: the 7,300-ton ironclads *Ding Yuan* and *Zhen Yuan*; the 2,300-ton protected cruiser *Ji Yuan*; the 2,300-ton protected cruisers *Zhi Yuan* and *Jing Yuan*; the 2,900-ton armoured cruisers *Jing Yuan* and *Lai Yuan*; the 1,400-ton ram cruisers *Chao Yong* and *Yang Wei*; and the 2,200-ton gunboat *Ping Yuan*. These ten ships of the Beiyang Fleet were reinforced by a 1,300-ton gunboat *Guang Jia* and two 1,000-ton gunboats *Guang Yi* and *Guang Bing.*

delivering Chinese troops to the peninsula.[480] On 25th July, a Chinese escort squadron encountered a Japanese intercepting squadron in waters around Asan and exchanged fire with it. This battle, known as the Battle of Fengdao, preluded the Battle of Yalu, a major naval engagement that decided the outcome of the war.[481]



Map 6.2: After the annihilation of the Fuzhou Naval Yard Fleet, the French secured command of the sea in southern and south-eastern China, and initiated the Blockade of Taiwan in October 1884 and the Rice Blockade in March 1885. A five-ship detachment of the Nanyang Squadron was sent to reinforce the defence of Taiwan, but was separated on their way south. Two ships – the *Cheng Qing* and *Yu Yuan* – were sunk in the Battle of Shipu, and the other three ships – the *Kai Ji, Nan Rui* and *Nan Chen* – found shelter in Zhenhai and survived the Battle of Zhenhai.

480 LHZQJ, Vol. 2, p. 800.

481 The Battle of Fengdao (also known as the Battle of Pungdo) took place on 25th July 1894, when the Beiyang Fleet's German-built protected cruiser *Ji Yuan* and Fuzhou-built torpedo cruiser *Guang Yi*, in an escort mission, encountered the Flying Squadron of the Japanese Combined Fleet. The Chinese ships were outnumbered. The *Ji Yuan* fled and the *Guang Yi* was beached and burned. *Gao Sheng*, a British ship carrying Chinese troops passed by the battlefield was sunk by the Japanese, and *Gao Sheng's* escort Jiangnan-built gunboat *Cao Jiang* was captured.

During the fifty-three days between the Battle of Fengdao and the Battle of Yalu, the Beiyang Fleet went on four sea patrols. A closer look at the details of the Chinese fleet's movement shows that instead of trying to contest command of the sea or prevent the Japanese fleet from using the sea freely, the Beiyang Fleet spent most of its time patrolling at three locations – the Weihaiwei Base, the Lüshun Base (Port Arthur) and the Taedong River mouth.[482] The first two were the bases of the Beiyang Fleet and the latter was the landing area of Chinese army units being transported to the Korean Peninsula. The Imperial Court, whist wanting the Beiyang Fleet to increase the frequency of combat patrols, wanted it to defend the Chinese coast rather than forcing a battle with the Imperial Japanese Navy. An order that was issued from Beijing on 23rd August pressed Admiral Ding Ruchang, commander-in-chief of the Beiyang Fleet, to patrol more actively between the Liaodong Peninsula and the Shandong Peninsula to safeguard Bohai Bay, which was the gateway to Beijing. The order explicitly forbade the fleet from sailing out of this area (see Map 6.3).[483]

On the way in which the Beiyang Fleet was used, Evans and Peattie commented:

> *'Although China possessed bases near the likely theatre of war, the generally passive strategy that it adopted shortly after the war broke out largely offset any advantages these bases might have provided. Instead of taking the war to Japan, the Peiyang Fleet* [the Beiyang Fleet] *at the instructions of the Imperial Court, was confined to the north half of the Yellow Sea and the Gulf of Chihli in order to defend the Chinese coast between the Weihaiwei and the Yalu River. In addition to abandoning Korea to Japanese landings, this strategy foolishly relinquished at the outset any attempt to gain command of the sea and thus wasted China's most powerful naval asset, the Peiyang Fleet, by reducing it to convoy duties.'*[484]

China's use of naval power was, to a considerable extent, at odds with the

[482] Jiang, *Dragon Flags over the Navy*, p. 361.
[483] GXCZRJSSL, Vol. 16, p. 27.
[484] Evans and Peattie, *Kaigun*, p. 40.

commonly recognised principles of maritime strategy. The steam navy was used as a 'Great Wall' at sea to: (a) prevent the enemy from landing troops on the Chinese coast rather than the Korean Peninsula; (b) protect strategic locations, such as naval bases and landing areas of Chinese army units projected to the battlefield; and (c) escort the convoy of troops and goods between the homeland and forward bases. Thus the navy played an auxiliary role in the war, with little attempt made to contest the command of the sea with the Japanese Combined Fleet.

Map 6.3: A map of Northeast Asia. The First Sino-Japanese War was a maritime war in which the main battlefield – the Korean Peninsula – was flanked on both its sides by bodies of water. Obtaining command of the sea was therefore of crucial importance during the war. However, Chinese commanders failed to realise this point and most of their naval operations were concentrated in the area between the Liaodong Peninsula, the Shandong Peninsula and the north-western coast of the Korean Peninsula (the rectangular area highlighted in grey).

However, the First Sino-Japanese War was a maritime war. The battlefield was located in the Korean Peninsula, which is flanked by the sea on its both sides. This meant that the belligerent that possessed the command of the sea would enjoy great strategic initiative. As to the importance of securing the command of the sea in maritime warfare, Corbett pointed out:

> '[In a maritime war,] *he that commands the sea is at great liberty and may take as much or as little of the war as he will, whereas those that be strongest by land are many times nevertheless in great straits.*'[485]

In contrast to China, Japan had a war plan that revolved around the command of the sea. The Imperial General Headquarters of Japan had based the whole plan of the war on the outcome of the war at sea. It was planned that if the Combined Fleet were to win decisively, the larger portion of the Japanese army would undertake immediate landings on the Chinese coast and bring the war to a swift conclusion. If the naval engagement were a draw and neither side gained control of the sea, the army would concentrate on the occupation of Korea. Lastly, if the Combined Fleet were defeated and consequently lost command of the sea, the bulk of the army would remain in Japan and prepare to repel a Chinese invasion. In case of this, the Japanese army units already positioned on the Korean Peninsula would be ordered to remain there and fight a rear-guard action.[486]

It was within this context that on 17th September 1894, the Battle of Yalu took place. To the Beiyang Fleet that had been busy escorting convoys to the west coast of the Korean Peninsula, this was a battle of encounter, whereas to the Japanese Combined Fleet, this was an opportunity for a decisive battle that had been sought for weeks. In this battle, the Beiyang Fleet, though not completely wiped out, was severely crippled. Of the twelve ships that took part in the battle, five were sunk, including one armoured cruiser, one protected cruiser, one gunboat and two ram cruisers. A couple of others were also severely damaged.

After the battle, the remnants of the Beiyang Fleet retreated into the Lüshun Base (Port Arthur) for repairs and were later withdrawn to the Weihaiwei Base, because the Japanese started to land troops on the east side of the Liaodong Peninsula, posing an imminent threat to the base.[487] In late November 1894, the Lüshun Base fell into Japanese hands, and the Japanese troops turned to the

---

485 Corbett, *Some Principles of Maritime Strategy*, p. 55.
486 Evans and Peattie, *Kaigun*, pp. 40-41.
487 Jiang, *Dragon Flags over the Navy*, p. 388.

Shandong Peninsula as its next target.[488] Confronted with no challenges at sea, the Japanese soon managed to land around two divisions of ground forces on the Shandong Peninsula in mid-January 1895. The Battle of Weihaiwei, which took place between 20th January and 12th February 1895, saw an amphibious assault by the Japanese army and navy against the remnant of the Beiyang Fleet that had been encircled in the defended Weihaiwei Base. This battle was again a Japanese victory, and the Beiyang Fleet was completely wiped out. This was the last major battle of the First Sino-Japanese War. The Japanese capture of the Liaodong Peninsula and the Shandong Peninsula forced China to sign the *Treaty of Shimonoseki*, which formally ended the war to the great detriment of China's national interests.

It can be distilled from this review that the strategic reason for China's defeat in the war was the same that had led to the nation's defeat in the war with France a decade before: the lack of interest in, or understanding of, the significance of command of the sea. It had been Japan's victory in the Battle of Yalu and concomitant success in securing command of the sea that had permitted the Japanese army to mount an effective landing on the coast of the Liaodong Peninsula and the Shandong Peninsula, which forced China into a peace treaty with Japan. Had the Chinese navy managed to disrupt Japan's power projection to the Korean Peninsula, or denied Japan's command of the sea, the result of the war could have been different. However, a review of the telegraphs between the *de facto* commander of the Chinese forces during the war, Li Hongzhang, and the Beiyang Fleet's commander-in-chief, Adm. Ding Ruchang, shows that such a strategy never occurred to them. Command of the sea, the key to victory in maritime warfare, continued to be ignored.

It was not that the Chinese military commanders had never been given the opportunity to learn about the theories of command of the sea. Western treatises on naval warfare, which contended the theory of command of the sea, had been introduced and translated into Chinese as early as in the 1870s and 1880s. However, the Self-Strengtheners' reading of Western treatises on maritime warfare had been selective. They emphasised the books that conformed to Chinese military traditions and disregarded those at odds with those traditions.

[488] Jiang, *Dragon Flags over the Navy*, p. 399.

For this reason, they read *A Treatise on Coastal-Defence* and overlooked others that promoted the theory of command of the sea. This ignorance of the importance of command of the sea precipitated China's defeat in the Sino-French War and the First Sino-Japanese War.[489]

6.2 The Formation of the Four Regional Fleets and the Fuzhou Navy Yard Fleet's Defeat in the Sino-French War

Nearly fifteen years after the Second Opium War, China's maritime defence was still provincially structured. The various coastal provinces were responsible for maritime defence of their own coasts, and each province had its own *water force* for this mission.[490] This structure of maritime defence was at odds with the principle of concentration of force: the side that takes offence could bring an overwhelmingly superior force to bear on China, whose *water forces* were thinly dispersed along the 18,000km long coastline. This structure of the empire's maritime defence remained unchanged after the Second Opium War. This was partly because the *water forces* were defeated too quickly by Western navies in the Opium Wars to make the Chinese political elites realise the shortcomings of a provincially-organised maritime defence (the reflections after the war had mainly focused on equipment inferiority). In addition, there was no centralised authority in the Imperial Court that had the responsibility to bring the problem under consideration.

In its early years, the Chinese steam navy complied with this organisational framework. From the 1850s to the early 1860s, various coastal provinces conducted naval modernisation themselves. Some of them sought a solution by purchasing second-hand steam vessels from abroad, whilst others made efforts to build steamships of their own. No effort was made to integrate the steamships into a centralised force and command structure. Moreover, as provincial finances were too scarce to support naval modernisation, such ships were mostly

[489] There were two other issues that impeded the Qing Empire's effective use of naval power: the hardware weakness of the Chinese steam navy and the lack of coordination between regional fleets. The former was addressed in Chapter three, and the latter will be elaborated on in the next section of this chapter.
[490] The *water forces* were not navies in the Western sense, see Section 2.2.

obsolete and many were not designed to be military vessels. Fundamentally, the ships that the various coastal provinces bought or built were little more than a ragtag collection of vessels of limited military value. These two factors – the unchanged organisational structure and the limited improvement in vessel performance – resulted little in terms of a net increase in the effectiveness of Chinese maritime defence.

The 1874 Japan invasion of Taiwan was a monumental event in Chinese naval history.[491] The modestly modernised Chinese steam navy – in fact provincial navies – was not able to counter the maritime invasion by what some surprised Chinese officials called the '*tiny and insignificant state*' of Japan.[492] The empire was shocked by its insufficient capability in tackling maritime threats. This led to a subsequent groundswell of appeal for reforming the organisational structure of maritime defence. Prince Gong, one of the few people in the Imperial Court concerned with naval modernisation initiated a nationwide discussion on how to improve the effectiveness of maritime defence.[493] Those who took part included a dozen senior officials from both the Imperial Court and coastal provinces.

A key outcome of the 1874 maritime defence discussion was that the weakness of provincially-organised maritime defence was brought to the forefront, and there was an increasing consensus that maritime defence should be restructured to enable a degree of concentration of force. Ding Richang, an enthusiastic navalist Self-Strengthener put forward a new organisational framework. In his memorial to the Throne he argued:

> '[Instead of structuring maritime defence provincially, we] *should install three admirals. From Shandong province to Zhili province, a Northern*

[491] The trouble began in 1871 when the 'subjected' aboriginals of Taiwan killed fifty-four shipwrecked sailors of the Ryukyu Kingdom. Japan organised a punitive maritime expedition on the grounds that the Ryukyu Kingdom acknowledged Japanese suzerainty (in fact the Ryukyu Kingdom acknowledged suzerainty of both China and Japan), and that the murdered sailors were Japanese subjects. The Japanese expeditionary force consisted of only three ships and about 3,600 men, but the Qing Empire had no navy strong enough to tackle it. The event disclosed China's insufficient naval power, a number of vigilant officials appealed for further improvement to China's maritime defence, which led to the 1874 discussion of maritime defence. see Rawlinson, *China's Struggle for Naval Development*, pp. 60-61.

[492] '蕞尔小邦'

[493] QMHJSL, pp. 5-7.

Ocean Admiral headquartered in Tianjin; from Zhejiang province to Jiangsu province, an Eastern Ocean Admiral headquartered in Wusong; and from Guangdong province to Fujian province, a Southern Ocean Admiral headquartered in Nan'ao. The admirals shall be well versed in both polite letters and the martial arts [here Ding probably meant the admirals should have administrative as well as a commanding power], *and should be empowered to memorialise the throne directly. Each sea should be garrisoned by six large steamships warships and ten gunboats. The three admirals shall hold joint-fleet exercises on a half-yearly basis.'*[494]

Li Hongzhang, Ding's political ally, elaborated on Ding's idea. Li's exposition disclosed the rationale behind Ding's plan. Li pointed out to the Imperial Court that an overstretched line of maritime defence would be financially burdensome, yet the dispersed ships would not make an effective force. He argued that since Bohai Bay (see Map 6.4) was the gateway to the capital, it should therefore be treated as the top priority. Jiangsu province and its vicinity was the gateway to the Yangtze River, and the Yangtze drainage basin was the main agrarian area, therefore it should be treated as the second priority. The defence of these two areas should be emphasised, whereas the rest of the coast deserved only marginal attention because, in Li's view, no lethal damage could be done to the empire if the political and economic centre was well protected.[495]

Ding and Li's proposal gained a larger-than-usual support from officials involved in the discussion. Among them were: Shen Baozhen, the then Fuzhou Navy Yard Commissioner; Wang Kaitai, governor of Fujian province; Wen Bin, governor-general of the Grand Canal; Yang Changjun, governor of Zhejiang province; and Liu Kunyi, governor-general of Liangjiang.[496] Many others, although disagreed with Ding and Li in some details, generally supported the proposal. Such broad consensus was rarely seen in the political arena of the Qing Empire, as political elites were usually inclined to take local interests as their

---

494 QMHJSL, p. 9. Ding Richang put forwarded a highly similar proposal seven years ago in 1867, but the suggestion fell on deaf ears.
495 CBYWSM-TZ, Vol. 99, pp. 20-22.
496 Wang, *Coastal Defence in the Late Qing Dynasty*, pp. 89-90, 94-95.

primary consideration. One key point can be distilled from this episode: virtually all Chinese elites, the keenest navalist Self-Strengtheners included, shared the view that safeguarding the Chinese feudal-agrarian order should be the ultimate goal of the Chinese steam navy.

This common perspective on security priorities made re-structuring maritime defence possible. In 1875, the Imperial Court promulgated an Edict appointing Li Hongzhang, then governor-general of Zhili Province and Superintendent of Trade for the Three Northern Ports (the Northern Superintendent hereafter), as, concurrently, Commissioner of Maritime Defence of the Northern Ocean; and Shen Baozhen, then governor-general of Liangjiang and Superintendent of Trade for the Five Southern Ports (the Southern Superintendent hereafter) as concurrent Commissioner of Maritime Defence of the Southern Ocean (note that the Southern Ocean in the 1875 Imperial Edict included the Eastern Ocean and Southern Ocean in Ding's original proposal).[497] The rationale of such division was largely in conformity with Ding and Li's proposal. The Imperial Edict stated that the seas flanking China to the east and southeast shared borders with numerous provinces, and demarcations must be made to specify responsibilities.[498]

Ostensibly, the 1875 Imperial Edict transferred the authority of maritime defence from provincial leaders to Li Hongzhang and Shen Baozhen. However, a closer look at the Imperial Edict shows that Li and Shen did not hold absolute authority. The Edict only conferred on them the power to *oversee* rather than *command* the maritime defence of the various coastal provinces, which meant that they were little more than coordinators. This was in conformity with the military practice of the Qing Empire: nobody other than the emperor himself should have real control over the armed forces. Taking the Opium Wars for example, the Imperial Court sent commissioners to the frontline, but the commissioners themselves had no troops under their direct command. Their power was limited to coordinating the armed forces of the various provinces in the vicinity of the battlefield. A great amount of time and energy was wasted on negotiating with local leaders who too had only limited contingents of troops at

497 QMHJSL, pp. 12-13.
498 Ibid.

their disposal.[499] In fact, Zuo Zongtang, the founding father of the Fuzhou Navy Yard, reminded the Imperial Court as early as in the initial stages of the 1874 maritime defence discussion that such division of responsibilities would offer little help to solve the lack of coordination between the 'three admirals' themselves, and between the admirals and the provincial leaders.[500]

Zuo's foresight was correct. Ostensibly, the commandership of maritime defence was now concentrated in the hands of Shen and Li; in fact, authority still remained in the hands of the provincial leaders. An immediate consequence was that inter-regional joint fleet exercises could not be effectively organised. In 1879, Shen drafted a memorial to the Throne suggesting the very first joint fleet exercise in Chinese naval history. He pointed out to the Imperial Court that the steamships of the seven coastal provinces lacked standardisation and were not familiar with the sea beyond their respective defence parameters, and therefore joint fleet exercises were needed to solve these problems. In carefully chosen language, Shen suggested that such exercises be held under the command of a '*prestigious senior commander*' appointed by the Imperial Court and be carried out in a '*suitable and central location*' to all regional fleets.[501] This approach indicates Shen attempted to please all regional fleets, aware of his lack of direct authority.

Unsurprisingly, the exercise was not a success. It was thwarted by a reluctance of coordination between the various provincial maritime defence authorities, who were primarily concerned about losing hold of the ships that they 'owned'. The '*prestigious senior commander*', Shen nominated at the end of the memorial was Li Chaobin, a *water force* commander subordinate to Shen, and the '*suitable and central location*' was Wusong, which also fell within Shen's jurisdiction. It is difficult to know whether Shen was trying to wrest control of the ships away from the various provincial maritime defence authorities, but it was clear that the various provincial maritime defence authorities feared that they would lose control of their ships to Shen. The then governor-general of

---

[499] Haijian Mao, *近代的尺度：鸦片战争军事与外交 Jindai de Chidu: Liangci Yapian Zhanzheng Junshi yu Waijiao [A Modern Assessment: the Military and Diplomatic Aspects of the Two Opium Wars]*, Updated Edition, (Beijing: SDX Joint Publishing Company, 2011), pp. 62-66. Mao, *The Collapse of the Heavenly Kingdom*, pp. 48-58.

[500] YWYD, Vol. 1, p. 114.

[501] YWYD, Vol. 2, pp. 386-387.

Liangguang refused to send ships to take part in the joint fleet exercise, insisting his ships were designed for coastal waters and inland rivers, and not sufficiently seaworthy to sail a long distance.[502] The governor-general of Minzhe was also reluctant to send ships to join the training project. His pretext was that he needed the ships to strengthen provincial defence and could spare no ship to attend exercises held elsewhere. Reluctantly, he sent only two gunboats to join the exercise and no ships were sent for joint fleet exercises thereafter.[503] Even Li, who endorsed Shen's joint fleet training proposal, became reluctant to take part in such exercises in the early 1880s after acquiring a few cutting-edge ships from England.[504] The ships that eventually showed up in the joint fleet exercises were mostly those of Shen's own fleet.[505] The plan of joint fleet training proved fruitless.

In the following years, the various provincial maritime defence forces evolved into four mutually-independent fleets. From south to north, they comprised the Guangdong Fleet, the Fuzhou Navy Yard Fleet, the Nanyang Fleet and the Beiyang Fleet. The Guangdong Fleet was subject to the authority of governor-general of Liangguang, and consisted mainly of coastal defence ships, none of which were larger than a thousand tons until the late 1880s. The Fuzhou Navy Yard had its own fleet, mainly composed of a number of 'dual-purpose ships' built by the yard in the 1870s. The Fuzhou Navy Yard Fleet was crippled during the Sino-French War and did not fully recover for the remainder of the Self-Strengthening Movement. The third fleet was the Nanyang Fleet, sponsored by the governor-general of Liangjiang. According to the 1875 Imperial Edict, the Nanyang Fleet should have been in charge of a vast body of water ranging from Jiangsu province to Guangxi province, but this was now divided among the Nanyang Fleet, the Fuzhou Navy Yard Fleet and the Guangdong Fleet. Since Shen failed to bring the latter two fleets under his control, the Nanyang Fleet remained a provincial force.

---

502 LZCGYJ-ZS, Vol. 15, pp. 1-4.
503 SWSGZS, vol.7, pp. 102-103. LZCGYJ-ZS, Vol.15, pp.1-4. YWYD, Vol.2, p. 493.
504 LWZGQJ-ZG, Vol.39, p. 34.
505 Jiang, *Dragon Flags over the Navy*, p. 92.

Map 6.4: A map of the distribution of the four regional fleets, namely: the Beiyang Fleet, the Nanyang Fleet, the Fuzhou Navy Yard Fleet and the Guangdong Fleet. Also shown on the map are the two main bases of the Beiyang Fleet: the Lüshun Base and the Weihaiwei Base, and the two main shipbuilding centres: the Fuzhou Navy Yard and the Jiangnan Arsenal.

The fourth regional fleet was the Beiyang Fleet, the strongest among the four. This is partly because the Beiyang Fleet was considered more important as it was guarding the waterways to the capital city, and partly because Li Hongzhang, the patron of the fleet, wielded more influence in the political arena. Unlike Shen Baozhen, who died prematurely in 1879, Li kept the Beiyang Fleet under his charge from 1875 until the fleet's defeat in 1895. During those two decades, Li's prestige increased to an extent that he was considered the most powerful man in late 19th century China. His stature ensured that he could exert strong influence over the two coastal provinces of Shengjing and Shandong, both of which yielded

to his authority thanks to his political leverage.

In the early 1880s, Shandong province bought two Rendel gunboats from England, but no sooner had the ships arrived they were commissioned into Li's Beiyang Fleet.[506] The Beiyang Fleet became the sole steam fleet of the three northern coastal provinces. There is, however, an element of luck in Li's successful monopolisation of maritime defence of the northern coastal provinces. The Tianjin Arsenal under his control was the only modern naval industrial plant in the area, whereas in the south the Guangdong Fleet, Fuzhou Navy Yard Fleet and Nanyang fleet were all backed by their own shipbuilding industries. This self-sufficiency made it easier for the three fleets to maintain independence from each other.

The four regional fleets were largely isolated from each other, and the isolation resulted in a severe lack of homogeneity in equipment and operational doctrine. One of Li's staff officer observed that the southern fleets' equipment, semaphore and even uniform differed from those of the Beiyang Fleet.[507] Another mid-1880s observation pointed out that the various regional fleets were unfamiliar with the seas beyond their respective defence parameters.[508] In 1879, joint fleet exercises were impeded mainly through reluctance, but by the mid-1880s, such reluctance had evolved into institutional heterogeneity between the four regional fleets. They were so different from and independent to each other that some historians claimed that they were in fact four navies.[509] As a result, coordination between them became even harder.

Provincialism not only had an adverse impact on training, but it also impacted on coordination during wartime. At the Battle of Fuzhou, a major naval engagement of the Sino-French War, a lack of coordination led to the defeat of the Fuzhou Navy Yard Fleet. More than a month passed between the first French warship intruding into the River Min on 14th July 1884 and the exchange of fire that started on 23rd August 1884.[510] During this period of time, the Chinese frontline commanders in Fuzhou desperately requested reinforcements from

506 Wang, *Li Hongzhang and the Beiyang Fleet*, p. 1321.
507 SKZJY, Vol. 3, p. 1.
508 Jiang, *Dragon Flags over the Navy*, p. 291.
509 FO 17/782, pp. 172-173, No. 152 Thomas Wade to Salisbury, Peking, Aug. 27, 1878.
510 Piotr Olender, *Sino-Japanese Naval War: 1894-1895*, (Petersfield: Mushroom Model Publications, 2014), pp. 41-47.

other regional fleets. A review of telegraph communication between Chinese frontline commanders and the Imperial Court shows that the former sent at least thirty telegraphs petitioning for reinforcements or a coordinated movement of other regional fleets.[511]

Despite the Imperial Court ultimately approving reinforcements, both the Beiyang and Nanyang fleets who were forwarded the petition declined Fuzhou's appeal.[512] The Nanyang fleet claimed that '*large* [seaworthy] *warships we do not have many, and small ones we have but a few …* [we are] *in a genuine difficulty to send any ship to* [reinforce] *Fuzhou.*'[513] The Beiyang Fleet also refused to send reinforcements with Li saying in his reply:

> '*the ships of the Beiyang Fleet are all small, they are not suitable to confront French ironclads. Also, there were three French vessels anchored outside the port of Yantai* [the Weihaiwei Base] *… and Lüshun* [Port Arthur], *away from the coast, also need to be safeguarded. If* [the Beiyang Fleet's] *ships were sent away, who should be responsible if something unexpected happens? The six* [Rendel] *gunboats* [of the Beiyang Fleet] *were only suitable for coastal defence and not for a sea battle*.'[514]

The Fuzhou Navy Yard fleet received only two *Wan Nian Qing* class wooden gunboats as reinforcements. As a result, the Chinese side was outmoded and outgunned. This was a key reason why the fleet was virtually annihilated within an hour during the Battle of Fuzhou.

With the Fuzhou Navy Yard Fleet crippled, the French naval action continued. The French Far East Squadron turned to Taiwan (at the time under the jurisdiction of Fujian province) as its next target, in the hope that its capture could force China into a peace treaty. The Imperial Court asked the Beiyang Fleet and the Nanyang Fleet to reinforce the defence of Taiwan. This time, the pressure of public opinion was much greater and they found it hard to refuse to send ships as before, which both dually did. However both also attempted to play for time

511 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 1052.
512 Rawlinson, *China's Struggle for Naval Development*, p. 113.
513 GXCZFJSSL, Vol. 19, p. 18.
514 LHZQJ, Vol. 1, p. 172.

and strived to reduce the number of ships dispatched. The French Far East Squadron initiated the Taiwan Campaign in late October 1884 and the Beiyang Fleet received orders to send reinforcements in early November. Despite this, the detachment only arrived at Shanghai on 20th December. Moreover, as soon as the ships arrived, they entered a local shipyard for repairs and weapon upgrades, which took another twenty days.[515] The Nanyang Fleet received the orders to send a detachment at almost the same time, but no sooner did they receive the order, than the ships were sent into shipyards for upgrading.[516] The detachment of the Nanyang Fleet set sail as late as mid-January 1885, two-and-a-half months after the French action started.[517]

As for the number of ships sent to reinforce Taiwan, the Imperial Court expected the Nanyang Fleet to send a detachment of five ships, and the Beiyang Fleet to send four to five ships.[518] Expectations both fleets were reluctant to meet. The Nanyang Fleet attempted to reduce the size of the detachment to three ships, and the Beiyang Fleet to two.[519] The Imperial Court compelled the Nanyang Fleet to send five ships by threatening to discharge its patron Zeng Guoquan (the governor-general of Liangjiang and the Southern Superintendent, in office from 1884 to 1887) from his position and put him on trial.[520] Li Hongzhang successfully managed to cut down the number of his reinforcement squadron to two ships by convincing the court that the rest of his ships were not seaworthy. Moreover, Li withdrawal his ships before they arrived at Taiwan on the grounds that the Japanese threats revealed in the *Gapsin Coup* in Korea mandated their return north.[521]

China lost the Sino-French War, but a closer examination of the material strength of the belligerents shows that although the French Far East Squadron had a margin of supremacy over China, it was nothing like the superiority enjoyed by the British two and a half decades previously during the Second Opium War. By the Sino-French War, the Qing Empire had a total number of over fifty modern warships, with more than half being locally built. Among others,

515 LWZGQJ-DG, Vol. 4, p. 23. ZFZZ, Vol. 6, p. 94.
516 ZFZZ, Vol. 6, pp. 202-203, 231-233.
517 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 1074.
518 ZFZZ, Vol. 6, p. 79.
519 ZFZZ, Vol. 6, p. 94. Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 1071.
520 ZFZZ, Vol. 6, p. 94-95.
521 ZFZZ, Vol. 6, p. 94. Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 1072.

thirteen were Armstrong gunboats, and two were German ships with two 8in guns each. Unfortunately these were not brought to bear and the war with the French was fought by the Fuzhou Navy Yard fleet alone at its homeport.[522] Rawlinson commented that China's problems in the war with France were '*not based on the material aspects of her navy as much as they were on the structure of leadership and the political organization of the empire.*'[523]

Many people who have commented on the Sino-French War argue that defeat could have been avoided had the regional fleets cooperated with each other more efficiently. However, the regional fleet commanders felt no obligation to help each other. Both Li Hongzhang, patron of the Beiyang Fleet, and Zeng Guoquan, patron of the Nanyang Fleet, were reproached for their reluctance to help when the Fuzhou Navy Yard Fleet and Taiwan Island were facing defeat. This should not be attributed to the personalities of Li Hongzhang and Zeng Guoquan but rather it was the institutional matrix, i.e. the provincialism of the Qing Empire that is to blame as no matter who became the patron of the regional fleets, they displayed the same inclination to take regional interests as their main concern.

6.3 The Establishment of the Chinese Board of Admiralty – the *Haijun Yamen* and the Beiyang Fleet's Defeat in the First Sino-Japanese War

China's defeat in the 1884-1885 Sino-French War convinced Chinese elites that a degree of naval centralisation was needed. Despite some victories on land, China ultimately lost the Sino-French War at sea. The defeat ignited a heated discussion amongst Chinese political elites, during which many came to realise that a deficiency of naval power resulting from the lack of coordination between the various regional fleets was the main reason for the defeat.[524] A groundswell of appeals for the establishment of a central naval administrative and commanding authority emerged, with advocates arguing it would structurally augment China's

[522] Elman, 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895', p. 316.
[523] Rawlinson, *China's Struggle for Naval Development*, p. 127.
[524] Wang, *Coastal Defence in the Late Qing Dynasty*, p. 206.

naval power by breaking up the compartmentalisation of the various regional fleets.[525] Li Hongzhang was one of such champion of a centralised naval authority. In an exceptionally lengthy memorial, he pointed out to the Imperial Court that all Western powers had admiralties and that even Japan, China's potential naval adversary, established one in 1872. In contrast, the Chinese navy, he argued, was divided and commanded by various mutually-independent provincial authorities. The various regional fleets lacked standardisation and centralised command.[526]

Li suggested that the Chinese *Haijun Yamen* (Board of Admiralty) should be modelled after Western admiralties, which were usually presided over by specifically-assigned officials and had authoritative power over administration, command and finance.[527] Another proposal put forward by a different Self-Strengthener suggested that a *Haijun Yamen* should be headed by a 'senior military professional', and be assisted by a group of officials specialised in administration, personnel, contract and purchase, supplies and accountancy. The proposal even envisioned a naval general staff and a supervision department.[528] The consensus on the need of a central naval authority was broad. Even Li's political enemy, Zuo Zongtang, then governor-general of Liangjiang, agreed with him on the necessity of such institution to a degree.[529] In short, many such proposals pointed in the same direction: in order to better coordinate the regional fleets, China needed a central naval authority that was professional and authoritative enough to bring the regional fleets under centralised administration and command.

In October 1885, the Imperial Court sanctioned the establishment of a *Haijun Yamen*. However, this institution did not meet the expectation of those who appealed for its establishment. To begin with, the institution lacked professionalism. A key reason for this was that the Manchu rulers' desire to maintain control overrode the demand for professionalism. J. Wang's research shows that during the ten years between the *Haijun Yamen*'s establishment in

525 Ibid., 207-208.
526 YWYD, Vol. 2, pp. 570-571.
527 Ibid.
528 Wang, *Collected Essays on the History of Modern Chinese Navy*, p.206-207. Jiang, *Dragon Flags over the Navy*, p. 215.
529 Wang, *Coastal Defence in the Late Qing Dynasty*, pp. 207-208.

1885 and its abolition in 1895, an overwhelming majority of officials that constituted the leadership and staff body of that institution were Manchus.[530] Many of them originated from the Beijing Field Force (*Shenji Ying*) – a Manchu imperial guard unit garrisoning the vicinity of the Forbidden City. Even the official seal of the Beijing Field Force was borrowed as the seal of the *Haijun Yamen* in its early days.[531] It can be inferred that most of them had very limited knowledge about modern navy, because the Kunminghu Naval Academy, which was specifically dedicated to naval education of the Manchus, opened in 1887 with the first batch of students finishing their study no earlier than 1893, one year before the First Sino-Japanese War broke out.[532] This meant that none of the Manchus that staffed the *Haijun Yamen* had a working knowledge of naval affairs. Many contemporary observations pointed out that the group not only lacked professionalism, but was also lax and corrupt.[533]

A second factor hindering the efficiency of the *Haijun Yamen* as a professional body was that the autocratic emperors did not want their power to be challenged by another authority. The organisation of this 'Chinese Admiralty' was comparable to that of the Grand Council, in that all its personnel held only concurrent appointments.[534] This meant that they all worked on a temporary basis for the institution, so that emperor could remove them from the institution at will. The *Haijun Yamen*'s nature as a temporary office undermined its efficiency. For example, Li Hongzhang was appointed as the vice minister of the institution. He was one of the few familiar with the steam navy (although it was arguable that his understanding of the steam navy was also limited), yet he was simultaneously governor-general of Zhili province and the Northern Superintendent of Trade. The *Haijun Yamen* was in Beijing, the official residence of the governor-general of Zhili province was in Baoding, and the office of the Beiyang Superintendent was located in Tianjin; the three cities are more than one hundred kilometres apart. In the absence of modern means of

530 Wang, *Collected Essays on the History of Modern Chinese Navy*, pp. 217-220.
531 Jiang, *Dragon Flags over the Navy*, pp. 217-218. Wang, *Collected Essays on the History of Modern Chinese Navy*, pp. 216-211.
532 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol.1,* p.612. Bao, *The History of the Chinese Navy*, p. 796.
533 Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, p. 1085. Li*, The Political History of China, 1840-1928*, pp. 123-126.
534 Wang, *Collected Essays on the History of Modern Chinese Navy*, pp. 216-211.

communication, the efficiency of decision-making of the *Haijun Yamen* was low. Furthermore, in order to minimise personal authority, there was no specific division of duty in the *Haijun Yamen*; officials in the institution had to sign official documents collectively.[535] Undoubtedly this was done to prevent ministers from monopolising power as a threat to the throne, but it would certainly increase the possibility for non-professional officials to take advantage of a confused situation.

Moreover, the *Haijun Yamen* lacked authority. Different from admiralties in the West, which had real power, the *Haijun Yamen*'s power was largely titular. The autocratic polity of the Qing Dynasty tolerated no authoritative institutions, especially military ones. For example, the Board of War was merely an administrative rather than a commanding body, and only exercised jurisdiction over the Green Standard Army – one of the many branches of armed forces of the Qing Empire. The emperor retained command of all military forces; the *Haijun Yamen* conformed to this rule and the proposed naval general staff and department of supervision were not established. Indeed, the notional power of 'commanding all regional fleets', as stipulated in the Imperial Edict that pronounced the establishment of the *Haijun Yamen,* remained nominal. During its ten years of existence between 1885 and 1895, aside from three major inspections and the promulgation of the 1888 Beiyang Fleet Regulation, the institution had few accomplishments.[536]

The *Haijun Yamen*'s lack of real power can be reflected in a memorial presented to the Throne by the institution itself in the aftermath of the First Sino-Japanese War. During the war, the elite of the Chinese steam navy – the Beiyang Fleet – was virtually annihilated. Other regional fleets were far more inferior in terms of both equipment and training. Rather than trying to revitalise the navy, the *Haijun Yamen* petitioned the Throne for its own dissolution, as there were no more ships over on which the institution could exercise its power:

'without large-scale procurement of large ships and big guns, it is

[535] Wang, *Collected Essays on the History of Modern Chinese Navy*, p. 220.
[536] For the first major inspection see QMHJSL, pp. 251-254. For the second and the third major inspection see LWZGQJ-ZG, Vol. 72, pp. 3-4. Only the first was attended by the head of the *Haijun Yamen*. Wang, *Li Hongzhang and the Beiyang Fleet*, pp. 390-395.

> *impossible to prepare for offence and defence. Without effective coordination between the* [fleets of] *the Northern Ocean and the Southern Ocean, it is impossible to exercise* [centralised] *command and control. … Since all these* [prerequisites] *are lacking, there is little for the* [Haijun] *Yamen to do. Staff should be dissolved and budgets should be suspended in order to cut expenses."*[537]

This extract indicates that the *Haijun Yamen* did not concern itself with the re-building of the steam navy. Key functions that characterised Western admiralties, such as acquisition of equipment and coordination of fleets, did not fall within the jurisdiction of the *Haijun Yamen*. The *Haijun Yamen* failed to replace the old decentralised system.

The *Haijun Yamen* also did not possess sufficient financial strength to exercise its authority. This was partly due to the rigid economic policy of the Qing Empire that refused to establish a Western-style financial infrastructure with which to raise funds, and partly due to strained relations between central and provincial governments that made it difficult for the former to wrest funds from the latter. When it was newly established, the *Haijun Yamen* secured around six million *taels* indirectly from foreign banks and raised another one million *taels* from 'maritime defence donations'.[538] It was expected that in the following years, a steady flow of four millions *taels* could be pressed from the various provinces.[539] However, the steam navy was more costly than expected and pressing funds from the provinces proved difficult. Provincial governments were requested to reduce the number of local Green Standard Army and old-fashioned war junks for the sake of naval funds, but such requests often fell on deaf ears. A report that the *Haijun Yamen* presented to the Throne in late 1886 complained that the seven million *taels* secured when the institution was established was quickly running out, and it was difficult to collect the four

---

[537] QMHJSL, p. 85.

[538] The Maritime Donation (海防捐) was employed by the Qing government to solve the shortage of naval funds. It clearly showed the incompetency of the Qing Empire's economy to upkeep a navy. Ranks and offices were openly sold for this purpose, and officials were encouraged to 'repay imperial kindness' (报效) with funds which could bring them promotion or even forgiveness for past delinquencies. Liu and Smith, 'The Military Challenge', p. 254.

[539] QMHJSL, pp. 626-627.

million *taels* of annual funding anticipated from the various provinces. The report indicates only one fourth of the funds were secured.[540]

As a result, the *Haijun Yamen* did not have enough financial strength to maintain its authority. A statistic shows that during the period from 1885 to 1894, even the elite Beiyang Fleet only received an average of sixty-two per cent of the funds expected from the *Haijun Yamen*.[541] To the other regional fleets, the *Haijun Yamen* was even less reliable as a source of funds, as priorities were given to the Beiyang Fleet. Consequently, the various regional fleets were forced to rely on local authorities for funding, who were therefore able to retain a high degree of influence over their 'own' fleets, including a say in a range of issues, such as the education and appointment of officers, the acquisition of ships, and the construction of related naval infrastructures.[542] Fundamentally, the authority of the *Haijun Yamen* over regional fleets was weak.

The original intention of establishing the *Haijun Yamen* was to unify the regionalised fleets and to bring them under a centralised administration and command. Ostensibly, this goal was achieved. During the ten years between its establishment in 1885 and its abolition in 1895, three fleet reviews were held in 1886, 1891 and 1894, to which all the four regional fleets sent their ships. Efforts were also made to achieve standardisation between the various fleets by joint-fleet exercises.[543] However, a closer examination shows that the so-called centralised coordination of the various regional fleets was not achieved upon the platform of the *Haijun Yamen*; instead, it was achieved largely because the Beiyang Fleet outgrew the other regional fleets to become the dominant one among the four.

In 1888, three years after its establishment, the *Haijun Yamen* authorised the Beiyang Fleet Regulation, which established the Beiyang Fleet as the pillar of the Chinese steam navy.[544] This was due to two reasons: first, the Beiyang Fleet was considered more important strategically. As has been indicated earlier in this chapter, the logic behind the demarcation of maritime defence parameters was continentally minded. The Beiyang Fleet was assigned with the task of

[540] QMHJSL, pp. 626-627.
[541] Wang, *Li Hongzhang and the Beiyang Fleet*, p. 383.
[542] Wang, *Collected Essays on the History of Modern Chinese Navy*, p. 223.
[543] QMHJSL, p. 501-503.
[544] Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, pp. 1083-1084.

safeguarding the sea flanking the gateway to the political centre of the empire, whilst other fleets in the south were given only secondary importance, as they garrisoned the agrarian areas. Second, Li Hongzhang, the patron of the Beiyang Fleet, was more powerful than other regional fleet heads, wielding considerable influence in the Imperial Court. Upon the establishment of the *Haijun Yamen*, Li was appointed vice minister of the *Haijun Yamen.* For these two reasons, the Beiyang Fleet received more attention than other regional fleets and the resulting skewed distribution of resources enabled it to become the single most power fleet of the Chinese steam navy.

As such, the so-called inter-fleet coordination was in fact not carried out on the platform of the *Haijun Yamen*; rather, it was enabled by the other fleets' subservience to the Beiyang Fleet and the prestige of its patron Li Hongzhang. The 1888 Beiyang Fleet Regulation provided that all other regional fleets should sail their seaworthy ships north, and subject them to the administration and command of the Beiyang Fleet annually from late March to late September.[545] Naturally, many were unhappy with this arrangement. A memorial to the Throne presented by a concerned official soon after the promulgation of the 1888 Beiyang Fleet Regulation illustrates such discontent. The memorial bluntly warned that such a regime would make China's steam navy Li's 'private' navy, and if Li's power was unchecked, it could pose a serious threat to the Imperial Court's authority in the long run.[546] In short, provincialism, the fundamental cause of the lack of coordination had not been eliminated; rather, it was only papered over. In summary, the *Haijun Yamen* made little substantial contribution to the development of the Chinese steam navy. There were still four fleets, with Li's the largest, yet they still lacked coordination.

When the First Sino-Japanese War broke out, the lack of coordination between regional fleets re-emerged. The Beiyang Fleet suffered heavy losses in the Battle of Yalu and retreated into the Lüshun Base (Port Arthur), and shortly thereafter, the Weihaiwei Base. It was concerned that if the Weihaiwei Base were attacked, the Beiyang Fleet would be completely annihilated (with the benefit of hindsight, we know that such worries made sense). Li Hongzhang, then vice

[545] QMHJSL, p. 501-503.
[546] YWYD, Vol. 3, pp. 17-18.

minister of the *Haijun Yamen* and patron of the Beiyang fleet, petitioned for reinforcements from the Nanyang Fleet, the second largest fleet by then. In 1894, the Nanyang Fleet had a considerable force; most noticeable among its ships were the four 2,200-ton cruisers acquired in the mid-1880s. Li expected that the Nanyang Fleet could send the four cruisers north and place them under the command of the Beiyang Fleet to strengthen their defence.[547] The Imperial Court responded to Li's petition actively and ordered the Nanyang Fleet to send three of the four cruisers north to help to defend the Weihaiwei Base. However, the Nanyang Fleet was reluctant to send any ships north, with its leaders arguing that the fleet was safeguarding the economically important Lower Yangtze Plain, which the Japanese were keen to control, and surprise attacks there were considered a real possibility. '*Both the frontline* [the Weihaiwei Base] *and the economic centre*', the Nanyang Fleet replied, '*are of vital importance*'.[548] No ships were sent north to the Beiyang Fleet's rescue.

In January 1895, Japan began to assemble ships outside the Weihaiwei Base, which put tremendous pressure on the remaining forces of the Beiyang Fleet. The Imperial Court sent another order to the Nanyang Fleet asking it to dispatch its cruisers to harass the Japanese archipelagos. It was expected this would force the Japanese Combined Fleet to divert some of its ships to defend its coast, thus relieving pressure on the Beiyang Fleet.[549] This proposal was declined by the Nanyang Fleet with the excuses that its ships were slow and insufficiently armoured, that its armaments were inadequate, and its officers not capable of such a mission.[550] These were almost exactly the same excuses employed by the Beiyang Fleet and the Nanyang Fleet in their refusal to send ships to the Fuzhou Navy Yard Fleet's rescue in the Sino-French War ten years previously.

In early-February 1895, Japan initiated an all-out offensive on the remaining ships of the Beiyang Fleet in the Weihaiwei Base. A total destruction of the

---

547 SXHDA-JWZRZZ, I, p. 176.
548 ZRZZ, Vol. 3, p. 127.
549 It was highly possible that this idea came from William F. Tyler, a Briton serving in the Beiyang Fleet. In his memoir he mentioned: 'my contribution to the discussion of the war … was this: - Buy telegraphically that new Chillan cruiser for delivery in our waters – I think she was the *Fifteenth of May* – the fastest cruiser in the world. … Give me command of her. … I will harry the enemy coast and shipping … [the Japanese] will detail the *Yoshino* and other fast cruisers to watch the coaling ports; and thus so much better for our fleet.' Tyler, *Pulling Strings in China*, pp. 38-39.
550 ZRZZ, Vol. 3, p. 377.

Beiyang Fleet seemed unavoidable, but the Nanyang Fleet suddenly changed its attitude towards the plan of harassing the Japanese homeland. Memorials were sent to Beijing calling for the acquisition of four to five protected cruisers and a dozen sea-going torpedo gunboats for the purpose (the Nanyang fleet still refused to send the ships that they already had). It was also suggested that the undelivered ships ordered by the Beiyang Fleet before the war now be delivered to the Nanyang Fleet instead.[551] It is highly probable that the Nanyang Fleet's sudden change of mind was due to its desire to seize the opportunity of the Beiyang Fleet's precarious position to strengthen itself. The plan was not implemented.

The naval battles in the First Sino-Japanese War were not 'fair' battles in that the Japanese Combined Fleet contained around twenty-two of Japan's most modern and combat-capable ships, whereas China, in spite of a total number of some sixty-five ships, was in a fourfold division.[552] Similar to the Fuzhou Navy Yard Fleet situation a decade ago, the Beiyang Fleet managed to secure only a few reinforcements from other regional fleets in the war with Japan. All came from the Guangdong Fleet, which sent three of its most seaworthy ships to the reinforcement of the Beiyang Fleet. However, even this was largely because the Guangdong Fleet was patronised by Li Hangzhang, the older brother of Li Hongzhang. Li complained that the First Sino-Japanese War was a war in which '*a corner of China* [the Beiyang Fleet] *fought against the whole Japanese Empire*'.[553] However, the weakness of the *Haijun Yamen* and the entrenched provincialism between the various regional fleets rendered it impossible for China to form its own combined fleet.

---

[551] Wemyu Zhu and Dun Liu, '张之洞与南洋海军 Zhang Zhidong Yu Nanyang Haijun [Zhang Zhidong and the Nanyang Fleet]', *Tsing Hua Journal of Chinese Studies*, Vol. 43 (New), No. 2. (Jun. 2013), pp. 283-310.

[552] The fourfold division of Chinese navy remained throughout the Sino-Strengthening Movement and even for some years after the First Sino-Japanese War, a British military diplomatic observed in 1898 that 'there are still four navies or squadrons'. A. E. J. Cavendish, 'The Armed Strength (?) of China', *Royal United Services Institution Journal*, Vol. 42, No. 244. (Jun. 1898), p. 718.

[553] GXCZRJSSL, Vol.20, pp. 25-28.

6.4 Conclusion

Qing China's use of naval power was heavily influenced by the nation's traditional military practice, and overlooked the importance of securing or preventing the enemy from securing command of the sea in maritime warfare. The Chinese military *modus operandi*, which stressed passive defence and fortress warfare, stemmed from its feudal-agrarian economic roots, but did not suit war at sea. The Chinese top echelon did have opportunities to learn about principles of modern maritime warfare from translated foreign books, but they only focused on *A Treatise on Coast-Defence*, which further reinforced their neglect of the principles of command of the sea. In the Sino-French War, the ships of the Fuzhou Naval Yard Fleet were used as a 'fortress' that lay between the enemy and their objective. The French Far East Squadron obtained command of the sea and China lost the war. The principles of command of the sea continued to be ignored in the First Sino-Japanese War; the Beiyang Fleet did not try to dispute command of the sea with the Japanese Combined Fleet. On the contrary, the Japanese secured command of the sea in the battle of Yalu, expanded the war to the Chinese homeland and won the war.

Chinese maritime defence was organised provincially in its early years. After the 1874 Japanese invasion of Taiwan a group of Chinese elites realised that a degree of integration of the provincial navies was a necessity. An 1875 Imperial Edict instructed the governor-general of Zhili and governor-general of Liangjiang to be in charge of maritime defence. However, the Edict did not give them real power and, apart from the northern coastal provinces, Chinese maritime defence remained localised. The provincialism impeded standardisation among the regional fleets, which eventually evolved into four heterogeneous fleets that were difficult to coordinate. In the Sino-French War, the Beiyang Fleet and the Nanyang Fleet were reluctant to reinforce the Fuzhou Naval Yard Fleet, which contributed to the latter's defeat. Consequent on the disaster of the war, a central naval institution – the *Haijun Yamen* – was created. However, because of the political dynamics – i.e. the autocratic Manchu rule, the tug-of-war between the central and local government and the conservatism in financial policies – the *Haijun Yamen* had no real power. The First Sino-Japanese War showed that the

lack of coordination between the regional fleets was not solved, and contributed to the fall of the Beiyang Fleet.

Chapter Seven

Conclusions

The Self-Strengthening Movement made extraordinary efforts and appeared to have achieved remarkable results in building a Western-style steam navy. When they opened in the late 1860s, the Fuzhou Navy Yard and the Jiangnan Arsenal were among the then largest shipbuilding centres in East Asia, with a staggering amount of nearly thirty million *teals* spent on the building and upgrading of these facilities.[554] The two main bases of the Beiyang Fleet, Lüshun and Weihaiwei, were also world-class naval ports. A considerable number of professional commanding officers, engine-room officers and naval architects were trained at home and abroad, and many of them were highly regarded by their Western counterparts. A total number of twenty-two million *taels* were spent on building ships at home and buying ships from abroad.[555] The two 7,300-ton ironclad battleships *Ding Yuan* and *Zhen Yuan* were the largest ships operating in East Asia at the time. By the outbreak of the First Sino-Japanese War, the Chinese steam navy boasted sixty-five large warships and forty-three torpedo boats, and ranked eighth in the world in terms of displacement.[556] In many ways, the accomplishments of the Self-Strengthen Movement in naval modernisation were impressive.

---

[554] Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty, Vol. 2*, pp. 1502-1503. The expenditure included that of other minor shipbuilding facilities such as the Tianjin Arsenal and the Guangdong Dockyard.

[555] Fan, *The New Policy toward Foreign Affairs during the Qing Dynasty*, Vol. 2, p. 1505.

[556] Hsü, *The Rise of Modern China*, p. 340. Elman, 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895', p. 316.

However, if we examine the effectiveness of this navy against its goal – '*learn barbarians' superior techniques with which to repel the barbarians*' – the navy could hardly be called a success. In 1874, the Chinese steam navy failed to defend Taiwan against the Japanese invasion. The incident was finally settled when China agreed to pay reparations of half a million *taels*. In addition, China agreed not to condemn Japan's action. This concession implied recognition of Japan's claim to sovereignty over the Ryūkyū Kingdom – a Chinese vassal state since 1372, which Japan annexed in 1879 and renamed it Okinawa prefecture. In the words of British minister to Japan Harry Parkes, this was a blatant revelation of China's weakness and an invitation to further foreign encroachment.[557] In 1884-1885, the Chinese steam navy lost the war against the French over the suzerainty of Annam (northern Vietnam). As a consequence of this defeat, China was forced to recognise all French treaties with Annam, which had been within China's sphere of influence since the Han Dynasty (140-87 BC). Although no indemnity was paid, Chinese expenditure during the conflict was in excess of one hundred million *taels*, with another twenty million *taels* incurred as debts.[558] In 1894-1895, the Chinese steam navy was again defeated in the war with Japan for influence over the Korean Peninsula. The *Treaty of Shimonoseki* signed between China and Japan in 1895 provided for (1) recognition of Korean independence and termination of all tribute to China; (2) an indemnity of two hundred million *taels* to Japan; (3) cession of Taiwan, the Pescadores, and the Liaodong Peninsula to Japan; (4) the opening of four cities – Chongqing, Suzhou, Hangzhou and Shashi – as ports for Japanese trade; (5) the right of Japanese nationals to open factories and engage in industry manufacturing in China.[559] The Chinese steam navy failed spectacularly in all the wars it fought during the Self-Strengthening Movement, and did not fulfil its duty to defend the Qing Empire against seaborne foreign aggressions.

These naval conflicts with the French and Japanese, as Bernard D. Cole observed, demonstrated that while China had successfully acquired the ships and guns of a Western-style modern navy, it had failed to institutionalise effective central administration, training, logistical and maintenance support, as

[557] Hsü, 'Late Ch'ing Foreign Relations, 1866-1905', p. 88.
[558] Ibid., 100-101.
[559] Hsü, *The Rise of Modern China*, p. 342.

well as command and control.[560] Moreover, there lacked an operational doctrine that suited modern naval warfare as well as effective inter-fleet exercise and coordination. Finally, China failed to fit the steam navy into the grand picture of a national strategy, which was in turn shaped by its politics, economy, ideology, etc.

However, it seems that these problems could not be fixed as long as the mind-set of '*Chinese learning for fundamental structure, Western learning for practical use*' dominated. William M. Lang, former chief-inspector of the elite Beiyang Fleet commented on China's efforts to re-build the steam navy following the First Sino-Japanese War:

> '*It's a sad pity to see China ordering ships at random without any thought of homogeneity. I spoke to Li Hung-chang* [Li Hongzhang] *on this subject, and he perceived the mistake they are making at Peking. Li begged me to draw up a scheme for the reorganisation of the navy, which I am now engaged upon in my spare time. I am very afraid of the Chinese are drifting into making the same blunder over again.*'[561]

The weakness of Chinese naval power was determined by the deep incompatibility between the Qing's empire's 'fundamental structure' and the requirements of a modern steam navy. This resulted in the repeated failures of the Chinese steam navy in achieving its national objectives.

7.1 A Review of the Relations between 'Fundamental Structure' and Naval Power

A country's political system works to determine a navy's administrative efficiency in times of peace and command efficiency in times of war. The political

[560] Bernard D. Cole, *The Great Wall at Sea: China's Navy Enters the Twenty First Century,* Second Edition, (Annapolis: Naval Institute Press, 2010), p. 5.

[561] Demetrius C. Boulger, *The Life of Sir Halliday Macartney*, (London: John Lane Company, 1908), p. 452. In another occasion in 1898, William M. Lang told the British Admiralty that '*the lesson of the late war with Japan has been lost upon China* [the First Sino-Japanese War]*. She will not change her mode of governing the Provinces, but will leave as of old the organisation of provincial squadrons in the hands of the several Viceroys* [governor-generals]*, and so will never have a National Fleet.*' Wright, *Hart and the Chinese Customs*, p. 481.

systems that favoured the growth of naval power were usually associated with the principles of democracy. This was mainly because of two reasons: first, in representative governments, the social groups that benefited from a powerful navy could be better heard in the decision-making processes, and these social groups provided consistent support for the navy. Conversely, absolutist monarchies usually reflected the ruler's personal interests, which were usually less persistent. Second, unlike autocracies, which tended not to tolerate any authority other than the ruler himself, representative governments allowed a degree of delegation of power to professional bodies, so that naval administration and command could become more efficient, whereas under autocratic rule it usually became less so.

The Qing Empire was undoubtedly an autocracy, and it was arguably the most autocratic episode in Chinese history. The emperor only attached marginal importance to the navy, fundamentally because the rise and fall of the empire was not dependent upon naval power. The navy only drew the attention of the emperors when the security of the continent was threatened from the sea, and their attention drew away once these seaborne threats were gone. At the same time, in order to protect their absolute power from being challenged, the Qing rulers tended to keep a check on any individual officials or bureaucratic bodies from becoming too powerful. This rendered a Chinese version of Alfred von Tirpitz or a powerful Admiralty largely impossible. Consequently, the development of naval power in China received no strong and sustained support from its top echelon.

While a unified country was a condition usually taken for granted by many historians looking at modern seapowers, a truth that cannot be overlooked when studying the late 19th century Chinese steam navy was that the Qing Empire was in reality highly decentralised, with the steam navy being built by provincial leaders who gained a great degree of autonomy in the aftermath of the turmoil during the mid-19th century. But the political landscape of that time was characterised by an on-going tug-of-war for power between the central and provincial authorities, with intense competitions amongst provincial authorities themselves. The navy often found itself caught up in the middle of these power struggles. Also, the steam navy never managed to supplant the traditional navy –

the *water forces* of the provinces, and as such it was always a mere modernised offshoot of an otherwise obsolete and incompetent military system. Lastly, the Chinese elites reached no agreement on the strategic status of the steam navy with multi-angled opposition arising towards the naval modernisation project. Under such circumstances, the administrative and command efficiency of the steam navy was invariably low.

***

The economy model and the economic strength of a nation determine the amount of resources it can offer in support of the development of its navy. Different from manpower-intensive armies, navies rather are typically capital and technology-intensive. Strong navies tended to be associated with societies characterised by capitalist economy, prosperous seaborne trade and a high degree of industrialisation. In societies where wealth was created mainly by seaborne trade, navies usually played a central role in the equation of national greatness, and therefore received strong and continuous attention. In capitalist economy it is usually easier to raise funds and to attain a higher degree of industrialisation, thus the development of the navies could be better supported. Financial and industrial capabilities are of critical importance to steam navies because they are much more sophisticated and expensive to build and maintain. Yet the attainment of higher financial and industrial capabilities usually requires a freer market and more flexible economic policies, which are at odds with the principles of command economy that agrarian nations tend to associate with.

In contrast, the Qing Empire's economic model was less capable of upholding a steam navy. It had a self-sufficient agrarian economy and a 'exalting agriculture and disparaging commerce' tradition with which to reinforce it, resulting in manufacturing and commerce being marginalised within the nation's economy. In this context, the role of the navy was reduced to merely a movable 'fortress' offering protection to agricultural lands and safeguarding the feudal-agrarian social order. It was therefore less significant in the eyes of Chinese policy-makers and considered insignificant by the society. Qing Dynasty China's weaknesses in commerce and manufacturing ensured that its society was less competent in

providing the steam navy with the financial and industrial resources that it required. In essence, China simply did not have the money to finance all of its established as well as new undertakings. At the same time, the Manchu government was determined to adhere to the Confucian orthodoxy to justify their legitimacy to rule, and its economic and financial policies were therefore particularly rigid. It was unsurprising therefore that a Western-style steam navy enjoyed little support within the economic context of the Qing Empire.

***

Social ethos played a key role in determining a society's willingness to support the development of its navy. Favourable social ethos served as a powerful catalyst in facilitating the growth of naval power. As a rule, societies with high regards towards their navies usually had prosperous maritime communities, which held a positive perspective towards seaborne trade, because navies played a key role in protecting and expanding the seaborne trade. At the same time, a pro-navy social ethos was usually a result of nurture as much as nature, which required continuous governmental effort to cultivate. Once such a social ethos is established, the role of the navy would be elevated from simply a necessity to a social ideal highly regarded by all levels of society. This in turn allowed the navy to easily secure the human, material and financial resources it needed to flourish.

In contrast, the ideology of the Qing Empire had a negative impact on the development of its steam navy by disparaging wealth creation through trade and disregarding science and technology due to their perceived deleterious effects on the Chinese feudal-agrarian social order. Instead of extolling the merchant classes, the Qing Empire installed Confucian scholars as the role models of society. Artisans and the merchants were marginalised, with even military men being placed categorically lower than Confucian scholars in the Chinese social stratification. A twofold phenomenon in the ideological realm of the Qing Empire was critical. Firstly, the Imperial Examinations were the tool by which the Qing Empire ensured that its elite classes, i.e. intellectuals, gentry and officials adhered to the Confucian ideology. By stressing Confucian values only the examinations rewarded literary and humanistic accomplishments at the

expenses of science, technology, commerce and industry, which were vital for the creation of a sea-loving social ethos. Secondly, the Confucian ideology and its symbiotic worldview resulted in a strong belief in the dynastic cycle and promoted the Sino-centric model among the Chinese elites, thus inhibiting any desire to learn from the West.

***

This dissertation addressed a point that Rawlinson failed to clarify in *China's Struggle for Naval Development: 1839-1895*, namely what the key challenge that the Chinese steam navy was struggling with during its development? The answer that this research offers is that the navy was struggling with the 'fundamental structure' of the Qing Empire. Chapters Three to Six demonstrated in detail how the empire's 'fundamental structure' was incompatible with the requirements of a modern steam navy. These determined the Chinese steam navy's fate as a force that was insufficiently powerful and ineffective in safeguarding the country. In war there is no prize for runner-ups, and to be deficient meant defeat, a point clearly proved by the catastrophic Sino-French War and First Sino-Japanese War. In this sense, the Qing Empire's steam navy were destined for defeat long before the battles began.

The Self-Strengthening Movement, which lasted from 1861 to 1895, did not try to alter the 'fundamental structure' of the Qing Empire; on the contrary, the ultimate aim of the movement was to safeguard and consolidate it. Under the slogan of '*learn barbarians' advanced techniques with which to repel the barbarians'* and '*Chinese learning for fundamental structure, Western learning for practical use*' the Self-Strengtheners attempted to utilise advanced Western military technology, that of a steam navy, with which to defend the old Chinese order. What they neglected was that *Chinese learning* and *Western learning* each had its own 'fundamental structure' and 'practical use', meaning a hybrid mixture was not sustainable because the former was bound to affect the latter.

7.2 Some Thoughts

A question emerged from the above discussion: would the Qing Empire be able to solve the institutional problems that impeded the development of its steam navy by reforming its 'fundamental structure'? And if not, why?

In the period between the end of the First Sino-Japanese War in 1895 and the fall of the Qing Empire in 1911, a flurry of reforms aimed at altering the Qing Empire's 'fundamental structure' were carried out ('the Post-1895 Reforms' hereafter).[562] Different from the Self-Strengthening Movement, which mostly focused on the acquisition of Western military equipment, the Post-1895 Reforms pursued a transformation of the Qing Empire into a Western-style modern power, with changes in various key aspects of the Chinese 'fundamental structure' being suggested. These reforms attempted to address the underlying political, economic and ideological issues that were at the root of China's weaknesses. In its political dimension, the reform agenda included establishing a constitutional monarchy and rebalancing the relationship between the central and local government. In its economic dimension, the goal of reforms was to enrich the country by promoting capitalism and industrialisation. In its ideological dimension, the reforms were aimed at changing the social ethos by establishing a new education system and official selection mechanism, so that the empire would have more talent to support the modernisation projects.

Had they been successfully implemented, the Qing Empire would have had institutionally evolved towards a form of Western-style capitalist power, which would have also shifted its 'fundamental structure' closer to that of a seapower and, as a result, led the way towards a stronger navy. This logic was understood by the post-1895 reformers as the leading reformist Kang Youwei had presented the Guangxu Emperor with a number of books compiled by himself on the political histories of modernised countries. Notably among the books were *A Study of the Political reforms in Meiji Japan*, and *An Account of the Reforms of Peter the Great of Russia* – countries that achieved exponential growth in naval power following periods of great institutional reform.

---

[562] In practical terms, they included the 1898 Hundred Days' Reform, the 1901-1905 New Policies and the 1905-1911 Constitutional Movement.

The post-1895 reformers were generally optimistic towards the successful implementation of the reforms. Kang once confidently pointed out to the emperor during a personal audience that '*after three years of reform China could stand on her own. From then on China would daily make progress and outstrip all the other countries in terms of wealth and power*'.[563] However, such optimism later proved unjustified. The Qing Empire did not become a Western-style power as expected; on the contrary, it declined even further and was overthrown by an internal uprising – the Revolution of 1911. Many historians argue that the Post-1895 Reforms, rather than consolidating the empire, had to a considerable extent precipitated its downfall.[564] Why, then, was Qing China's 'fundamental structure' so difficult to change?

The key to the successful implementation of the constitutional reform was a redistribution of power between the emperor and the members of the Imperial Court. Autocratic rulers' reluctance to relinquish power was not unusual, but what made constitutional reforms exceptionally difficult for the Qing Empire was that the rulers were Manchus. Prior to the constitutional reform, consecutive Qing emperors had been the sole rulers of China. This monopolisation of power papered over the Manchu-Han schism.[565] Constitutionalism meant that the emperor would no longer be the monopoliser of power. To the emperor, if he had to share power with others, it would be with the Manchus rather than with the Han Chinese. Therefore, the institutional reshuffle became retrogressive in that it increased the power of the Manchu bureaucrats *vis-à-vis* that of the Han Chinese.[566] The constitutional reform revealed the Manchus' discrimination against the Han Chinese, which stirred up anti-Manchu sentiment among the Han Chinese elites. As Sun Yat-sen, the leading spirit of the Revolution of 1911 noted

---

563 Chang, 'Intellectual Change and the Reform Movement, 1890-98', p. 325.

564 Chuzo Ichiko, 'Political and Institutional Reform, 1901-11' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2,* Kwang-Ching Liu and John K. Fairbank eds., (Cambridge: Cambridge University Press, 1980), p. 415.

565 Prior to the 20th century, nationalism was very weak in China. Whether or not one was Chinese was judged by whether or not one followed the Chinese way of life. The Manchus successfully disguised their ethnic 'alienness' by observing the Confucian traditions, and therefore gained the cooperation of Han Chinese elites.

566 After the reform, the number of Han Chinese officials in Qing bureaucracy declined from roughly half to less than one-third in the top echelon of the government, see Hsü, *The Rise of Modern China*, pp. 390-391, 414. Among the thirteen new Cabinet ministers, eight were Manchus (five among the eight were imperial relatives), whereas only four were Han Chinese. Chien-nung Li, *The Political History of China, 1840-1928*, Ssu-yü Teng and Jeremy Ingalls trans. and eds., (Stanford: Stanford University Press, 1967), pp. 234-235.

in one of his revolutionary slogans '*expel the Manchus, restore the* [Han] *Chinese rule, and establish a federal republic.*'[567]

Another aim of the Post-1895 Reforms in the political realm was to rebalance the power between the central and local governments. This would create a unitary regime in which the central government would have much greater authority, and the *de facto* separate status of the provinces would be ended. The key to successful implementation of the reform was therefore to wrestle power away from the local authorities and transfer it into the hands of the Imperial Court. The high provincial officials opposed such moves, and the reform was fruitless.[568] The fundamental reason of the miscarriage of the reform was the self-serving objectives of the provincial leaders, whose loyalty to the Imperial Court was not motivated by patriotism, but rather out of a fear that their personal power would vanish should it fall. The efforts to rebalance the power between central and local government therefore eroded their loyalty to the central government even further. As a result, in less than two months after the outbreak of the Revolution of 1911, fourteen out of the eighteen provinces that constituted China proper declared independence.[569]

A primary economic objective of the Post-1895 Reforms was to establish a degree of capitalist economy and industrialisation to enrich the country. The self-sufficient agrarian economy was the main roadblock to success. Feuerwerker commented:

> '*The equilibrium of traditional agriculture had been reached at a very low level of per capita output of which a very high proportion was consumed by the agricultural producers. Only a small quantity of marketable surplus was available either as industrial raw material or to feed the non-farm sector. Conversely, the effective demand for urban manufactured products*

---

567 '*Expel the Manchus, restore the [Han] Chinese rule, and establish a federal republic*' (驱除鞑虏，恢复中华，创立民国) was the oath taken by members of the Revive China Society (兴中会). This was the first revolutionary body of the late Qing Dynasty. It was founded by Sun Yat-sen in Hong Kong in 1895.

568 Li, *The Political History of China, 1840-1928*, p. 211-212; and Ichiko, 'Political and Institutional Reform, 1901-11', p. 395.

569 Chunhui Hu, '再论地方主义与辛亥革命 [Regionalism and Xinhai Revolution Revisited]' in *纪念辛亥革命九十周年国际学术讨论会论文集 Jinian xinhai geming jiushi zhounian guoji xueshu taolunhui lunwenji [A Collection of Theses Presented at the International Symposium Commemorating 90th Anniversary of Xinhai Revolution], Vol. 1*. Association of Chinese Historians ed., (Beijing: Central Party Literature Press, 2002), p. 412.

was limited. Thus the immediate possibilities either of extensive industrialization or of agricultural development were narrowly constrained by the disabilities of the agricultural sector.'[570]

However, the self-sufficient agrarian economy was so entrenched that it was almost impossible to change it in any meaningful way. The massive size of the Chinese self-sufficient economy had created considerable redundancy that ensured its stability. Crises such as natural disasters and social turmoil, while endemic, did not threaten the overall structure. By the downfall of the Qing Dynasty, there was little sign suggesting that the traditional form of economy, which had lasted for thousands of years, was in such a poor state as to be readily replaced by other forms of economy.[571]

The reforms also tried to boost the Qing Empire's economy by issuing national debt, which the imperial government first issued in 1898. Contrary to its name, which can be literally translated as 'manifest credibility bonds', this episode ended disastrously, further lowering people's confidence in the government.[572] Many local officials compulsorily apportioned the bonds to native Chinese capitalists, and many debt holders were later 'encouraged' to relinquish the debts and make it a donation to the government.[573] When the government tried to issue another national debt in the late 1910s, society responded coldly.[574] Before a degree of democratisation was attainted in China, it would be very difficult to establish capitalistic confidence in the government; but as long as the absolutism remained, this remained very hard.

Establishing a new education system and official selection mechanism was also at the forefront of the Post-1895 Reform agenda. It was suggested that the traditional academies and Imperial Examinations should be replaced by Western-style schools to nurture and select the best talent for China's modernisation projects, allowing sustainable progress to stem from this

---

570 Feuerwerker, 'Economic Trends in the Late Ch'ing Empire', p. 15.
571 Ibid., 69.
572 '昭信股票', This was a twenty-year long-term bond aimed at raising 100 million *taels* at an interest rate of five per cent. See Yu Li, '晚清昭信股票发行过程论略 [A Review of the Zhao Xin Bond Issuance Process in Late Qing]', *Modern Chinese History Studies*, No. 4. (Jul-Aug., 2006), pp. 111-127.
573 Ibid., 126.
574 Ibid.

fundamental change. To the disappointment of the advocates of educational reform, they not only failed to increase the amount of talent for aiding China's modernisation attempts, but also generated a series of destabilizing side effects that contributed to the eventual downfall of the Qing Empire.[575] Before the educational reforms were introduced, the Chinese social elite was mainly comprised of Confucian scholars with examination degrees who enjoyed special privileges; these disappeared with the abolition of the Imperial Examinations system. For candidates who had spent many years preparing for the examinations, the abolition of the system meant that their only pathway to social mobility and success had been closed off. Discontentment towards the reforms stemmed from these social groups whose vested interests depended on the Imperial Examinations. Even the reformers who advocated the abolition of the examinations became concerned about its destabilizing side effects. Liang Qichao, a leading figure of the Post-1895 Reforms suggested restoring the Imperial Examinations, as '*millions of old-style Confucian scholars and students lost their hopes overnight*.'[576]

The old education and official selection system, though ineffective in nurturing talent for modernisation, had been successful in keeping the elites loyal to the Qing Empire. However, following the introduction of Western ideologies, especially modern nationalism, the ethnic 'alienness' of the Manchus was brought to the fore, and a consequent anti-Manchu sentiment began to spread firstly amongst the students in the new schools, and later to the literati.[577] While the government tried to suppress anti-Manchu movements amongst the students, anti-Manchu sentiment exhibited by the students only became stronger the tighter the control became, with students of the new schools increasingly rallying under the banner of nationalism. Many of them went on to become key promoters of the early 20th century anti-Manchu movement, and played crucial

[575] The main reason for the failure of promoting modern education was mainly because of the entrenchment of the traditional education and the conservatism of the authorities. See Chuzo Ichiko, 'Political and Institutional Reform, 1901-11', pp.379-380

[576] Shiming Li, *大变局下的晚清政治 Dabianju xia de Wanqing Zhengzhi [Late-Qing Politics during Times of Great Changes]*, (Shanghai: Shanghai Classics Publishing House, 2009), p. 109; Dezhao Wang, *清代科举制度研究 Qingdai keju zhidu yanjiu [Research on the Qing Dynasty Examination System],* (Beijing: Zhonghua Shuju, 1984), p. 246.

[577] The introduction of Western-style education further fueled the anti-Manchu sentiment. See Chuzo Ichiko, 'Political and Institutional Reform, 1901-11', pp.382-383.

roles in the 1911 Revolution, which eventually overthrew the Manchu Dynasty.

The efforts to reform the Qing Empire's 'fundamental structure', i.e. the Post-1895 Reforms, constituted a war against the whole package of Chinese traditions and the people whose interests were dependent on them. Hsü observed:

> *'the* [post-1895] *radical reform was in effect a war on the whole Confucian state and society, one which could not but arouse strong opposition from many quarters. The abolition of the eight-legged essay* [i.e. the Imperial Examinations] *hurt the future of all students who, having spent their lives preparing for the … examinations, suddenly discovered what they learnt was not what the government wanted. … The elimination of sinecure offices and the three governorships and the suggestion that twelve new bureaus be created caused fear of dismissal among all office holders. The decree which called for the appointment of men of practical knowledge instead of promotion of incumbents on a seniority basis created insecurity in officialdom. The military reform jeopardised the privileges of the Manchus bannermen and the Chinese Green Standard Army. … The order to turn temples and shrines into schools irritated the monks and priests. The fact that all the reformers except the emperor were Chinese aroused fear among Manchus. All these elements – scholars, officials, army officers, eunuchs, monks, and the Manchus in general – sought to undo the reform.'*[578]

In retrospect, the Post-1895 Reforms did take China into a new era, and played a significant role in shaping the country of today. However, as far as the survival of the Qing Empire is concerned, the Post-1895 Reforms were a disastrous failure, which helped to bring around its downfall rather than strengthening it.

With respect to the relations between the Qing Empire's 'fundamental structure' and its naval power, the old 'fundamental structure' of the Qing Empire, as has been shown in Chapters Three to Six, was not compatible with the requirements of a steam navy; and, as has been shown in the passages above, it

[578] Hsü, *The Rise of Modern China*, p. 381.

was impossible to adapt the 'fundamental structure' to meet the requirements of a steam navy in a short time. In short, the development of the Qing Empire's naval power was caught in a dilemma: the old 'fundamental structure' was not suitable for a steam navy, yet establishing a new 'fundamental structure' that better suited the navy could not be achieved overnight.

***

The practical significance of this dissertation is that it has put forward a key point that has often been overlooked in the discussions of the late 19th century Chinese steam navy: the 'fundamental structure' of a nation played an essential role in determining the success or failure of its navy. In present day China, this point is still largely neglected. As was shown in the very beginning of this dissertation, the English word 'seapower' was interpreted in Chinese in a way that one-sidedly stressed its outward sign – naval power – whilst overlooking the fact that different nations had different types of 'fundamental structures', which did not always favour the growth of naval power. The absence of a term that underscores the relationship between naval power and the 'fundamental structure' of a nation should be seriously addressed, because language is the vehicle of thought, and the lack of such a term in the Chinese language suggests that the Chinese academics have not paid enough attention to it.

As to which word could serve this purpose, the answer was already suggested one and a half centuries ago. The First Opium War, which took place between 1840 and 1842, saw the first clash between China and a real seapower – Britain. Lin Zexu, a key commander on the Chinese side, had a close friend named Wei Yuan. A progressive scholar, Wei was subsequently known by later generations of Chinese as 'the first Chinese to open his eyes to the world'. In the aftermath of the war, Wei presented Lin with a book on some European nations edited by himself, with these countries' characteristics arranged by trade, navies and fortified ports, as well as the impacts that they would have on Chinese-dominated East Asia. The book was titled *Illustrated Treatise on*

Maritime Nations (*haiguo tuzhi*).[579] As the name of the book suggests, Wei vaguely realised that those nations were different from the Qing Empire – they were *haiguo* (maritime nations). In this sense, the answer to why the Qing Empire's steam navy failed is that it was not a *haiguo.*

[579] '海国图志'

Bibliography

Primary Sources

Chinese Language Sources and Abbreviations

CBYWSM: *清代筹办夷务始末 Qingdai Chouban Yiwu Shimo [A Complete Account of the Management of Barbarian Affairs]*; DG [Daoguang Reign]; XF [Xianfeng Reign], TZ [Tongzhi Reign].

CZZYHB: *船政奏议汇编 Chuanzheng Zouyi Huibian [A Collection of Memorials concerning Navy Yards]*.

DQHD: *钦定大清会典 Qinding Daqing Huidian [Collected Statutes of the Great Qing Dynasty]*; GX [Guangxu Chao, Guangxu Reign].

DZSL: *大清历朝实录-德宗实录 Da Qing Lichao Shilu-Dezong Shilu [The Veritable Records of the Qing Dynasty, Guangxu Reign]*.

Guo, Songtao. *伦敦与巴黎日记 Lundun yu Bali Riji [Diaries in London and Paris]*. Changsha: Yuelu Shushe, 1984.

GXCZFJSSL: *清光绪朝中法交涉史料 Qing Guangxu Chao Zhongfa Jiaoshe Shiliao [Historical Documents on Sino-French Negotiations during the Guangxu Reign]*.

GXCZRJSSL: *清光绪朝中日交涉史料 Qing Guangxu Chao Zhongri Jiaoshe Shiliao [Historical Documents on Sino-Japanese Negotiations during the Guangxu Reign]*.

GZD: *宫中档 Gong Zhong Dang [Secret Palace Memorials]*; KX [Kangxi-chao zouzhe, of the Kangxi Reign].

HFD: *海防档 Haifang Dang [Archives on Maritime Defence]*; Fuzhou Navy Yard; Acquisition of Ships and Guns. Taibei: Institute of Modern History of Academia Sinica, 1957.

HJDSJ: *海军大事记 Haijun Dashiji [A Chronicle of Major Events of the Navy]*.

JNZZJJ: *江南制造局记 Jiangnan Zhizaoju Ji [Records of the Jiangnan Arsenal]*.

JLSB: *蜷庐随笔 Juan Lu Suibi [Essays from the Juan Lu]*. By Wang Bogong.

KEZY: *客座赘語 Kezuo Zhuiyu [Idle Talks with Guests]*. By Gu Qiyuan.

LHZQJ: *李鸿章全集 Li Hongzhang Quanji [Complete Works of Li Hongzhang]*; DG [Diangao, Telegraphs]. Compiled by Gu Tinglong and Dai Yi. Hefei: Anhui Educational Publishing House, 2007.

Luo, Dachun. *台湾海防并开山日记 Taiwan Haifang Bing Kaishan Riji [The Defence and Development of Taiwan, 1874-75: The Journal of Brigade-General Luo Dachun]*. Compiled by David Pong. Taibei: The Economic Research Department, Bank of Taiwan, 1972.

LWZGQJ: *李文忠公全集 Li Wenzhong Gong Quanji [Complete Works of Li Hongzhang]*; ZG [Zougao, Memorials]; PLHG [Pengliao Hangao, Personal Letters]; YSHG [Yishu Hangao, Letters to the Zongli Yamen]. Edited by Wu Rulun , 1905.

LZCGYJ: *刘忠诚公遗集 Liu Zhongcheng Gong Yiji [Posthumous Works of Liu Kunyi]*; ZS [Zoushu, Memorials].

PYLJ: *彭玉麟集 [Collected Works of Peng Yulin]*.

QMHJSL: *清末海军史料 Qingmo Haijun Shiliao [Historical Materials on the Navy at the End of the Qing Dynasty]*. Compiled by Zhang Xia et al. Beijing: Ocean Press, 1982.

QSG: *清史稿 Qing Shi Gao [A Draft Dynastic History of the Qing]*; LZ [Liezhuan, Biographies]. Edited by Zhao Erxun et al. 1927. Reprint, Beijing: Zhonghua Shuju, 1976.

SKZJY: *适可斋纪言 Shike Zhai Jiyan [Recorded Words from the Shike Chamber]*, By Ma Jianzhong.

SWSGZS: *沈文肃公政书 Shen Wensu Gong Zhengshu [The Political Works of Shen Baozhen]*.

SXHDA: *盛宣怀档案资料选辑 Sheng Xuanhuai Dangan Ziliao Xuanji [A Compilation of Selected Materials from the Sheng Xuanhuai Archives]*; JWZRZZ [Jiawu Zhongri Zhanzheng, Jiawu Sino-Japanese War]. Compiled by Chen Xulu et al., Shanghai: Shanghai People's Press, 1979.

WTHJ: *翁同龢集 Weng Tonghe Ji [A Collection of Works by Weng Tonghe]*. Compiled by Junmei Xie. Beijing: Zhonghua Shuju, 2005.

SYZZL: *殊域周咨录 Shuyu Zhouzi Lu [Extensive Inquiry of Faraway Places]*. By Yan Congjia.

YFJ: *严复集 Yan Fu Ji [Collected Works of Yan Fu]*. Edited by Wang Shi. Beijing: Zhonghua Shuju, 1986.

YWYD: *洋务运动 Yangwu Yundong [The Self-Strengthening Movement]*. Edited by Association of Chinese Historians. Shanghai: Shanghai People's Press, 1959.

ZFZZ: *中法战争 Zhong Fa Zhanzheng [Sino-French War]*. Edited by Association of Chinese Historians. Shanghai: Shanghai People's Press, 1961.

ZGYJ: *郑观应集 Zheng Guan Ying Ji [Collected Works of Zheng Guanying]*, Edited by Xia Dongyuan. Shanghai: Shanghai People's Press, 1982.

ZRZZ: *中日战争 Zhong Ri Zhanzheng [First Sino-Japanese War]*. Edited by Association of Chinese Historians. Shanghai: Shanghai People's Press, 1956.

ZGFQJ: *曾国藩全集 Zeng Guofan Quanji [Complete Works of Zeng Guofan]*; ZG [Zougao, Memorials].

ZZTQJ: *左宗棠全集 Zuo Zongtang Quanji [Complete Works of Zuo Zongtang]*; ZG [Zougao, Memorials].

English Language Sources

Books

Barrow, John. *Travels in China*. London: T. Cadell and W. Davies, 1804.

Boulger, Demetrius C. *The Life of Sir Halliday Macartney*. London: John Lane Company, 1908.

Bridge, Cyprian. *Sea-power, and Other Studies*. London: Smith, Elder & Co., 1910.

Chen, Xiafei and Han, Rongfang, eds., *Archives of China's Imperial Maritime Customs: Confidential Correspondence between Robert Hart and James Duncan Campbell, 1874-1907*. Beijing: Foreign Languages Press, 1990-1993.

Fremantle, Edmund R. *The Navy as I Have Known It: 1849-1899*. London: Cassell and Company Ltd., 1904.

Giquel, Prosper. *The Foochow Arsenal, and Its Results: From the Commencement in*

1867, to the End of the Foreign Directorate, on the 16th February 1874. Translated by H. Lang. Shanghai: Shanghai Evening Courier, 1874.

Holcombe, Chester. *The Real Chinese Question.* New York: Dodd, Mead and Company, 1909.

Lindley, Augustus F. *Ti-ping Tien-kwoh: The History of the Ti-ping Revolution*. London: Day & Son Ltd., 1866.

Martin, W. A. P. *The Lore of Cathay: Or, The Intellect of China*. Edinburgh and London: Oliphant, Anderson & Ferrier, 1901.

Scheliha, Von. *A Treatise on Coast-Defence*. London: E & F. N. Spon, 1868.

Shore, Henry N., *The Flight of the Lapwing: A Naval Officer's Jottings in China, Formosa and Japan*. London: Longmans, Green, and Co., 1881.

Tyler, William Ferdinand. *Pulling Strings in China*. London: Constable & Co. Ltd., 1929.

Periodicals

Armstrong, William G. 'Address of Sir W. G. Armstrong, President' in *Minutes of Proceedings of the Institute of Civil Engineers; with Other Selected and Abstracted Papers*. Edited by James Forrest. Vol.68, London: Institute of Civil Engineers, 1882.

Cavendish, A. E. J. 'The Armed Strength (?) of China', *Royal United Services Institution Journal*, Vol. 42, No. 244 (Jun. 1898), pp. 705-723.

Secondary Sources

Periodicals

Cao, Wenzhen. '美国的海洋霸权战略与中国的对策 Meiguo de Haiyang Baiquan yu Zhongguo de Duice [American Maritime Hegemony and China's Countermeasures]', *Strategy and Management*, No. 5 (Sep-Oct., 2011), pp. 69-82.

Chen, Shaofang. '清代地方官治行政的传统特征 Qingdai Difang Guanzhi Xingzheng de Chuantong Tezheng [The Traditional Characteristics of Local Administration and Bureaucracy in Qing Dynasty]', *求索 Qiu Suo [Seeker]*, No. 7 (Jul. 2006), pp. 219-222.

Chen, Yuxiang. '清代中叶广东海盗之研究 (1810-1885) [The Study of Chinese Pirates along the Coast of Guangdong Province during the Qing Dynasty, 1810-1885]', *Cheng Kung Journal of Historical Studies*, No. 34 (Jun., 2008), pp. 93-130.

Chun, Doris Sze. 'John Fryer, the First Agassiz Professor of Oriental Languages and Literature, Berkeley'. *Chronicle of the University of California, No. 7, Changing Places: Scholars Here and Abroad*. (Fall 2005)
http://www.cshe.berkeley.edu/publications/changing-places-scholars-here-and-abroad

Elman, Benjamin A. 'Imperial Politics and Confucian Societies in Late Imperial China: The Hanlin and Donglin Academies', *Modern China*, Vol. 15, No. 4 (Oct., 1989), pp. 379-418.

Elman, Benjamin A. 'Naval Warfare and the Refraction of China's Self-Strengthening Reforms into Scientific and Technological Failure, 1865-1895'. *Modern Asian Studies,* Vol. 38, No. 2 (2004), pp. 283-326.

'The Failures of Contemporary Chinese Intellectual History', *Eighteenth-Century Studies*, Vol. 43, No. 3 (Spring 2010), pp. 371-391.

'The Manchu-Language Archives of the Qing Dynasty and the Origins of the Palace Memorial System', *Late Imperial China*, Vol. 22, No. 1 (Jun. 2001), pp. 1-70.

Fong, David and Gerson, Jack. Review of *China's Struggle for Naval Development: 1839-1895*. By John L. Rawlinson. *The Journal of Asian Studies*. Vol. 27, No. 1 (Nov., 1967), pp. 139-140.

Fung, Allen. 'Testing the Self-Strengthening: The Chinese Army in the Sino-Japanese War of 1894-1895', *Modern Asian Studies*, Vol. 30, No. 4, Special Issue: War in Modern China (Oct., 1996), pp. 1007-1031.

Gao, Cuilian. '近代中国海军教育与甲午海战 Jindai Zhongguo Haijun Jiaoyu Yu Jiawu Haizhan [Modern Chinese Navy Education and the Jiawu Sea Battles]', *Military Historical Research*. Vol. 15, No. 2 (Summer 1990), pp. 110-116.

Ge, Quansheng Junhu Dai, Fanneng He, and Jingyun Zheng. '过去 300 年中国部分省区耕地资源数量变化及驱动因素分析 Guoqu 300 Nian Zhongguo Bufen Shengqu Gengdi Shuliang Bianhua Ji Qudong Yinsu Fenxi [Changes of Cultivated Land Quantity and Driving Forces Analysis of Some Provinces of China in Past 300 Years]', *Progress in Natural Science*, Vol. 13, No. 8 (2003), pp. 825-832.

Hart, Roger. 'Beyond Science and Civilization: A Post-Needham Critique', *East Asian Science, Technology, and Medicine*, No. 16 (1999), pp. 88-114.

Horowitz, Richard S. 'Breaking the Bonds of Precedent: The 1905-6 Government Reform Commission and the Remaking of the Qing Central State', *Modern Asian Studies*, Vol. 37, No. 4 (Oct., 2003), pp. 775-797.

Hsü, Immanuel C. Y. 'The Great Policy Debate in China, 1874: Maritime Defense Vs. Frontier Defense', *Harvard Journal of Asiatic Studies*, Vol. 25 (1964-1965), pp. 212-228.

Li, Yu. '晚清昭信股票发行过程论略 Wanqing Zhaoxin Gupiao Faxing Guocheng Lunlue [A Review of the Zhao Xin Bond issuance Process in Late Qing]', *Modern Chinese History Studies*, No. 4 (Jul-Aug., 2006), pp. 111-127.

Liu, Zhongmin. '海权问题与中美关系论述 Haiquan Wenti Yu Zhongmei Guanxi Lunshu [Sea Power and the Debate on Sino-US Relations]'. *Northeast Asia Forum*, No. 5 (Sep-Oct., 2006), pp. 69-75.

Luo, Ergang. '清季兵为将有的起源 Qingji Bing Wei Jiang You de Ojyuan [The Origins of Private Armies in the Qing]', *Journal of Chinese Social Economic History*, Vol. 5, No. 2 (Jun. 1937), pp. 235-250.

Peattie, Mark R. Review of *The Chinese Steam Navy, 1862 – 1945*. By Richard N. J. Wright. *War in History*. Vol. 10, No. 1 (Jan., 2003), pp. 116-117.

Pi, Mingyong. '洋务运动时期引进西方海战理论情况述论 Yangwu Yundong Shiqi Yinjin Xifang Haizhan Lilun Qingkuang Shulun [The Introduction of Western Naval Warfare Doctrines During the Self-Strengthening Period]', *Military Historical Research*, Vol. 30, No. 1 (Spring 1994), pp. 89-97.

Pong, David. 'Keeping the Foochow Navy Yard Afloat: Government Finance and China's Early Modern Defence Industry, 1866-75'. *Modern Asian Studies*, Vol. 21, No. 1 (1987), pp. 121-152.

Pye, Lucian W. 'China: Erratic State, Frustrated Society', *Foreign Affairs*, Vol. 69, No. 4 (Fall 1990), pp. 56-74.

Ringmar, Erik. 'Performing International Systems: Two East-Asian Alternatives to the Westphalian Order', *International Organization*, Vol. 66, No. 1 (Winter 2012), pp. 1-25.

Wang, Daqing. '1980 年以来中国古代重农抑商问题研究综述 1980 Nian Yilai Zhongguo Gudai Zhongnongyishang Wenti Yanjiu Zongshu [A Review of Researches concerning Ancient Chinese Policy of Encouraging Agriculture and Restraining Commerce Since 1980]', *Trends of Recent Researches on the History of China*, No. 3 (Mar., 2000), pp.11-18.

Wang, Ruicheng. '"权力外移"与晚清权力结构的演变, 1855-1875 Yuanli Waiyi Yu Wanqing Quanli Jiegou De Yanbian [Outbound Transfer of Power and the Evolution of the Late Qing Power Structures, 1855-1875]', *Modern Chinese History Studies*, Vol. 188, No. 2 (Mar.-Apr., 2012), pp.

Wu, Silas Hsiu-liang. 'The Memorial Systems of The Ch'ing Dynasty (1644-1911)', *Harvard Journal of Asiatic Studies*. Vol. 27 (1967), pp. 7-75.

Zhang, Yajuan. '近十五年来清代乾嘉年间海盗问题的研究 Jin Shiwu Nian Lai Qingdai Qianjia Nianjian Haidao Wenti de Yanjiu [Researches in the Last Fifteen Years concerning Maritime Piracy in Qian Long-Jia Jing Regimes of Qing Dynasty]', *Trends of Recent Researches on the History of China*, No. 3 (Mar-Apr., 2012), pp.42-49.

Zhu, Wemyu and Liu, Dun. '张之洞与南洋海军 Zhang Zhidong Yu Nanyang Haijun [Zhang Zhidong and the Nanyang Fleet]', *Tsing Hua Journal of Chinese Studies*, New Vol. 43, No. 2 (Jun. 2013), pp. 283-310.

Books and Chapters in Edited Books

Bao, Zunpeng. *中国海军史 Zhongguo Haijun Shi [The History of the Chinese Navy]*. Taibei: Haijun Chubanshe, 1951.

清季海军教育史 Qingji Haijun Jiaoyushi [History of Naval Education in the Late Qing]. Taibei: Guofang Yanjiuyuan, 1969.

Bastid-Bruguiere, Marianne. 'Current of Social Change' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Baugh, Daniel. 'The Eighteenth Century Navy as a National Institution' in *The Oxford Illustrated History of the Royal Navy*. Edited by J. R. Hill and Bryan Ranft. Oxford: Oxford University Press, 1995.

Biggerstaff, Knight. *The Earliest Modern Government Schools in China*. Ithaca, NY.: Cornell University Press, 1961.

Chan, Wellington K. K. 'Government, Merchants and Industry to 1911' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Chang, Hao. 'Intellectual Change and the Reform Movement, 1890-8' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Chao, Kang. *Man and Land in Chinese History: An Economic Analysis*. Stanford: Stanford University Press, 1986.

Chen, Xulu. *近代中国社会的新陈代谢 Jindai Zhongguo Shehui de xinchendaixie [Metabolism in Modern Chinese Society]*. Shanghai: Shanghai People's Press, 1992.

Chen, Yue. *近代国造舰船志 Jindai Guozao Jianchuan Zhi [A History of the Domestically Built Steam Warships in Late Qing]*. Jinan: Shandong Huabao Press, 2011.

'甲午黄海大东沟海战北洋海军阵型考 Jiawu Huanghai Dadonggou Haizhan Beiyang Haijun Zhenxing Kao [An Examination on the Beiyang Fleet's Battle Formations during the Battle of Yalu]' in *北洋海军新探：北洋海军成军120周年国际学术研讨会论文集 Beiyang Haijun Xintan: Beiyang Haijun Chengjun 120 Zhounian Guoji Xueshu Yantaohui Lunwenji [Beiyang Navy Revisited: A Collection of Theses Presented at the International Symposium Commemorating the 120th Anniversary of the Beiyang Navy's Establishment].* Edited by Junjie Qi and Yang Guo. Beijing: Zhonghua Shuju, 2012.

Cole, Bernard D. *The Great Wall at Sea: China's Navy Enters the Twenty First Century*. Second Edition. Annapolis: Naval Institute Press, 2010.

Confucius. *The Analects*. Translated by D. C. Lau. London: Penguin Books, 1979.

Corbett, Julian S. *Some Principles of Maritime Strategy.* London: Longmans, Green and Co., 1911.

Dai, Yi. '洋务历史试论 Yangwu Lishi Shilun [A Tentative Essay on the Foreign Affairs Movement]' in *洋务运动史论文选 Yangwu Yundong Shi Lunwen Xuan [Selected Papers on the History of the Foreign Affairs Movement]*. Edited by Fangji Ruan et al. Beijing: People's Press, 1985.

Deng, Gang. *Maritime Sector, Institutions, and Sea Power of Premodern China*. Westport, CT: Greenwood Press, 1999.

Elliott, Mark C. *The Manchu Way: The Eight Banners and Ethnic Identity in Late Imperial China*. Stanford: Stanford University Press, 2001.

Engels, Friedrich. *Anti-Duhring*. 1878. Reprint. New York: International Publishers, 1970.

Evans, David C. and Peattie, Mark R. *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy, 1887-1941*. Annapolis: Naval Institute Press, 1997.

Fairbank, J. 'Introduction: Varieties of the Chinese Military Experience', in *Chinese Ways in Warfare.* Edited by F. A. Kierman and J. K. Fairbank. Cambridge, MA: Harvard University Press, 1974.

'Introduction: the Old Order', in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Edited by John K. Fairbank. Cambridge: Cambridge University Press, 1978.

Fan, Baichuan. *清季的洋务新政 Qing Ji de Yangwu Xinzheng [The New Policy Toward Foreign Affairs during the Qing Dynasty]*. Shanghai: Shanghai Book Store Publishing House, 2009.

Feng, Youlan. *中国哲学简史 Zhongguo Zhexue Jian Shi [A Short History of Chinese Philosophy]*. Beijing: Peiking University Press, 1996.

Feuerwerker, Albert. *China's Early Industrialization: Sheng Hsuan-huai (1844–1916) and Mandarin Enterprise*. Cambridge, MA: Harvard University Press, 1958.

'Economic Trends in the Late Ch'ing Empire, 1870-1911' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Gerschenkron, Alexander. *Economic Backwardness in Historical Perspective: A Book of Essays*. New York: Frederick A. Praeger Publishers, 1962.

Graff, David A. 'State Making and State Breaking' in *A Military History of China*. Updated Edition. Edited by David Graff and Robin Higham. Lexington: University Press of Kentucky, 2012.

Grove, Eric. *The Future of Sea Power*. Annapolis: Naval Institute Press, 1990.

Harding, Richard. *The Evolution of the Sailing Navy, 1509-1815 (British History in Perspective)*. First American Edition. New York: St. Martin's Press, 1995.

Seapower and Naval Warfare, 1650-1830. London: UCL Press, 1999.

Hao, Yen-ping and Wan, Erh-min. 'Changing Chinese Views of Western Relations, 1840-95' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Hill, Richard. *War At Sea In The Ironclad Age*. London: Cassell & Co., 2002.

Hsü, Immanuel C. Y. *The Rise of Modern China*. Third Edition. Oxford: Oxford University Press, 1983.

'Late Ch'ing Foreign Relations, 1866-1905' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Hu, Chunhui. '再论地方主义与辛亥革命 Zailun Difang Zhuyi yu Xinhai Geming [Regionalism and Xinhai Revolution Revisited]' in *纪念辛亥革命九十周年国际学术讨论会论文集 Jinian xinhai geming jiushi zhounian guoji xueshu taolunhui lunwenji [A Collection of Theses Presented at the International Symposium Commemorating 90th Anniversary of Xinhai Revolution], Vol. 1*. Edited by Association of Chinese Historians. Beijing: Central Party Literature Press, 2002.

Huang, Ray. *Broadening the Horizons of Chinese History: Discourses, Syntheses, and Comparisons*. Armonk, NY: M. E. Sharpe, Inc., 1999.

Huntington, Samuel P. *The Soldier and the State: The Theory and Politics of Civil-Military Relations*. Cambridge MA: Belknap Press of Harvard University Press, 1957.

Ichiko, Chuzo. 'Political and Institutional Reform, 1901-11' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Jiang, Baili. *国防论 Guofang Lun [On National Defence]*. Hong Kong: Open Page Publishing Co., 2013.

Jiang, Ming. *龙旗飘扬的航队-中国近代海军兴衰史 Longqi Piaoyang dejiandui: Zhongguojindai Haijun Xingshuaishi [Dragon Flags over the Navy: The Rise and Fall of the Sea Fleet in Modern China].* Beijing: Sanlian Shudian, 2002.

Jones, Susan M. and Kuhn, Philip A. 'Dynastic Decline and the Roots of Rebellion' in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Edited by John K. Fairbank. Cambridge: Cambridge University Press, 1978.

Kennedy, Paul M. *The Rise And Fall of British Naval Mastery*. London and Basingstoke: The Macmillan Press, 1983.

Kuo, Ting-yee and Liu, Kwang-Ching. 'Self-Strengthening: The Pursuit of Western Technology'. in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Edited by John K. Fairbank. Cambridge: Cambridge University Press, 1978.

Lambert, Andrew. D. 'Introduction' in *Steam, Steel and Shellfire: The Steam Warship, 1815-1905.* Edited by Robert Gardiner. London: Conway Maritime Pres Ltd, 1992.

War at Sea in the Age of Sail. London: Cassell & Company Ltd., 2000.

Leibo, Steven A. *Transferring Technology to China: Prosper Giquel and the Self-Strengthening Movement*. Berkeley: University of California Press, Institute of East Asian Studies, 1985.

Leung, Edwin Pak-wah. ed. *Political Leaders of Modern China: A Biographical Dictionary*. Westport, CT: Greenwood Press, 2002.

Li, Chien-nung. *The Political History of China, 1840-1928*. Translated and edited by Ssu-yü Teng and Jeremy Ingalls. Stanford: Stanford University Press, 1967.

Li, Shiming. *大变局下的晚清政治 Dabianju xia de Wanqing Zhengzhi [Late-Qing Politics during Times of Great Changes]*. Shanghai: Shanghai Classics Publishing House, 2009.

Li, Yangfan. *走出晚清: 涉外人物及中国的世界观念之研究 Zouchu Wan Qing: Shewai Renwu Ji Zhongguo De Shijie Guannian Zhi Yanjiu [Beyong the Late Qing: A Research concerning Personalities of Foreign Affairs and China's Word View]*. Second Edition. Beijing: Peking University Press, 2012.

Lin, Qingyuan. *福建船政局史稿 Fujian Chuanzheng Ju Shigao [A Draft History of the Fuzhou Navy Yard]*. Fuzhou: Fujian People's Press, 1999.

'论福建船政局管理的先进性 Lun Fujian Chuanzhengju Guanli de Xianjinxing [On the Advanced Nature of Fuzhou Navy Yard Administrations]' in *船政文化研究 Chuanzheng Wenhua Yanjiu [Researches on Fuzhou Navy Yard and Associated Cultural Achievements]*. Edited by Zuoxing Zhang. Beijing: China Social Press, 2003.

Lincoln, Margarette. *Representing the Royal Navy: British Sea Power, 1750-1815*. Aldershot: Ashgate Publishing Company, 2002.

Liu, Huaqing. *'海军的地位与作用问题 [The Roles and Strategic Significance of the Navy]'* in Huaqing Liu. *刘华清军事文选 Liu Huaqing Junshi Wenxuan [Selected Military Works of Liu Huaqing]*, Vol. 1. Beijing: PLA Press, 2008.

Liu, Kwang-Ching. 'British-Chinese Steamship Rivalry in China, 1873-85'. in *The Economic Development of China and Japan*. Edited by C.D. Cowan. London: George Allen & Unwin Ltd., 1964.

'The Ch'ing Restoration' in *The Cambridge History of China Volume 10: Late Ch'ing 1800–1911, Part 1*. Edited by John K. Fairbank. Cambridge: Cambridge University Press, 1978.

Liu, Kwang-Ching and Smith, Richard J. 'The Military Challenge: The North-west and the Coast' in *The Cambridge History of China, Vol. 11: Late Ch'ing, 1800-1911, Part 2*. Edited by Kwang-Ching Liu and John K. Fairbank. Cambridge: Cambridge University Press, 1980.

Liu, Yazhou et al. eds. *甲午殇思 Jiawu Shangsi [Grief Thoughts about Jia Wu War]*. Beijing: Shanghai Far East Publishers, 2014.

Lococo Jr., Paul. 'The Qing Empire' in *A Military History of China*. Updated Edition. Edited by David Graff and Robin Higham. Lexington: University Press of Kentucky, 2012.

Lorge, Peter. 'Water Forces and Naval Operations' in *A Military History of China*. Updated Edition. Edited by David Graff and Robin Higham. Lexington: University Press of Kentucky, 2012.

Lü, Shiqiang, *中国早期轮船经营 Zhongguo Zaoqi de Lunchuan Jingying [Early Steamship Projects in China].* Taibei: Institute of Modern History of Academia Sinica, 1962.

Luo, Ergang, *绿营兵制 Luying Bingzhi [A History of the Green Standard Army]*. Beijing: Zhonghua Shuju, 1984.

湘军兵志 Xiangjun Bingzhi [A History of the Hunan Army]. Beijing: Zhonghua Shuju, 1984.

Ma, Ping-an. '北洋集团的兴起与清末地方和中央权力之争 Beiyang Jituan de Xingqi yu Qingmo Difang he Zhongyang Quanli Zhizheng [The Rise of the Beiyang Clique and the Struggles between Regional and Central Governments in the Late Qing]' in *纪念辛亥革命九十周年国际学术讨论会论文集 Jinian xinhai geming jiushi zhounian guoji xueshu taolunhui lunwenji [A Collection of Theses Presented at the International Symposium Commemorating the 90th Anniversary of Xinhai Revolution], Vol. 1*. Edited by Association of Chinese Historians. Beijing: Central Party Literature Press, 2002.

Ma, Yau-Woon. *靖海澄疆 - 中国近代海军史事新诠 Jinghai Chengjiang: Zhongguo Jindai Haijun Shishi Xinquan [A New Examination of the History of Modern Chinese Navies]*. Beijing: Zhonghua Shuju, 2013.

Mahan, Alfred. T. *The Influence of Sea Power Upon History: 1660–1783*. New York: Dover Publication, Inc., 1989

Mao, Haijian. *天朝的崩溃：鸦片战争再研究 Tianchao de bengkui: Yapian zhanzheng zaiyanjiu [The Collapse of the Heavenly Kingdom: Rethinking the Opium War]*. Beijing: Sanlian Shudian, 1995.

近代的尺度：鸦片战争军事与外交 Jindai de Chidu: Liangci Yapian Zhanzheng Junshi yu Waijiao [A Modern Aessment: the Military and Diplomatic Aspects of the Two Opium Wars]. Updated Edition. Beijing: SDX Joint Publishing Company, 2011.

Marx, Karl. *Capital*. Vol. 1. London: Penguin, 1981.

'The Eighteenth Brumaire of Louis Napoleon'. in *Selected Works*, Vol. 1. Karl Marx. Moscow: Foreign Languages Publishing House, 1962.

McNeill, William. *The Pursuit of Power: Technology, Armed Force, And Society Since A.D. 1000*. Chicago: University Of Chicago Press, 1982.

Metzler, Mark. *Lever of Empire: The International Gold Standard and the Crisis of Liberalism in Prewar Japan*. Berkeley, CA: University of California Press, 2006.

Needham, Joseph. *The Grand Titration: Science and Society in East and West*. London: George Allen & Unwin, 1969.

Ng, Chin-keong. 'Information and Knowledge: Qing China's Perceptions of the Maritime World in the Eighteenth Century' in *The East Asian Maritime World 1400-1800: Its Fabrics of Power and Dynamics of Exchanges*. Edited by Angela Schottenhammer. Wiesbaden: Harrassowitz Verlag, 2007.

Ni, Lexiong. *文明的转型与中国海权: 从陆权走向海权的历史必然 Wenming de zhuanxing yu Zhongguo haiquan: Cong lunquan zouxiang haiquan de lishi biran [Civilizationa Transformation and China's Sea Power: The Historical Inevitability of Moving from Land Power to Sea Power]*. Beijing: Xinhua Press, 2010.

Ni, Yuping. *清朝嘉道财政与社会 Qingchao jia-dao caizheng yu shehui [Finance and Society in the Qing Dynasty, Jiaqing and Daoguang Periods]*. Beijing: The Commercial Press, 2013.

Olender, Piotr. *Sino-French Naval War: 1884-1885.* Petersfield: Mushroom Model Publications, 2012.

Sino-Japanese Naval War: 1894-1895. Petersfield: Mushroom Model Publications, 2014.

Padfield, Peter. *Maritime Supremacy and the Opening of the Western Mind*. Woodstock and New York: Overlook Press, 1999.

Paine, S. C. M. *The Sino-Japanese War of 1894-1895: Perceptions, Power, and Primacy*. Cambridge: Cambridge University Press, 2003.

Parkinson, Roger. *The Late Victorian Navy: The Pre-Dreadnought Era and the Origins of the First World War*. Woodbridge and Rochester: The Boydell Press, 2008.

Patalano, Alessio. *Post-war Japan as a Sea Power: Imperial Legacy, Wartime Experience and the Making of a Navy*. London: Bloomsbury Academics, 2015.

Perdue, Peter C. 'From Turfan to Taiwan: Trade and War on Two Chinese Frontiers' in *Untaming the Frontier in Anthropology, Archaeology, and History*. Edited by Bradley J. Parker and Lars Rodseth. Tucson, AZ: University of Arizona Press, 2005.

PLA Navy Headquarters eds., *近代中国海军 Jindai Zhongguo Haijun [Modern Chinese Navies]*. Beijing: Haichao Publishing, 1994.

Qi, Qizhang. *北洋舰队 Beiyang Jiandui [The Beiyang Fleet]*. Jinan: Shandong People's Press, 1981.

晚清海军兴衰史 Wanqing Haijun Xingshuaishi [The Rise and Fall of the Navy of the Late Qing Dynasty]. Beijing: People's Press, 1998.

Rawlinson, John L. *China's Struggle for Naval Development: 1839-1895*. Cambridge, MA: Harvard University Press, 1967.

Roger, N. A. M. *The Safeguard of the Sea: A Naval History of Britain 660-1649*. London: Penguin Books Ltd., 2004.

The Command of the Ocean: A Naval History of Britain, 1649-1815. London: W. W. Norton & Company, 2004.

Rüger, Jan. *The Great Naval Game: Britain and Germany in the Age of Empire*. Cambridge: Cambridge University Press, 2007.

Saneyoshi, Yasuzumi. *The Surgical and Medical History of the Naval War between Japan and China*. Tokyo: Tokyo Printing Company, 1901.

Schencking, J. Charles. *Making Waves: Politics, Propaganda, and the Emergence of the Imperial Japanese Navy, 1868–1922*. Stanford: Stanford University Press, 2005.

Sumida, Jon. T. *In Defence of Naval Supremacy: Financial Limitation, Technological Innovation and British Naval Policy, 1889-1914*. London: Routledge, 1993.

Sun, Tzu. *The Art of War*. Translated by Samuel B. Griffith. Oxford: Oxford University Press, 1971.

Teng, Ssu-Yü and Fairbank, John K. *China's Response to the West: A Documentary Survey, 1839-1923.* Cambridge, MA.: Harvard University Press, 1979.

Till, Geoffrey. *Seapower: A Guide for the Twenty-First Century*. Second Edition. London: Routledge, 2009.

Vries, Peer. *State, Economy and the Great Divergence: Great Britain and China, 1680s-1850s*. London: Bloomsbury Academics, 2015.

Wakeman, Frederic. *Strangers at the Gate: Social Disorder in South China, 1839-1861*. Berkeley, CA: University of California Press, 1966.

The Fall of Imperial China. New York: The Free Press, 1977.

Wang, Dezhao. *清代科举制度研究 Qingdai keju zhidu yanjiu [Research on the Qing Dynasty Examination System]*. Beijing: Zhonghua Shuju, 1984.

Wang, Ermin. *清季兵工业的兴起 Qingji bing gongye de xingqi [Rise of the armaments industry in Late Qing Period]*. Taibei: Institute of Modern History, Academia Sinica, 1972.

Wang, Hongbin. *清代前期海防：思想与制度 Qingdai qianqi haifang： sixiang yu zhidu [Coastal Defence in the Early Qing Dynasty: Theory and System]*. Beijing: Social Sciences Academic Press (China), 2002.

晚清海防：思想与制度研究 Wanqing Haifang： sixiang yu zhidu yanjiu [Coastal Defence in the Late Qing Dynasty: A Study on Theory and System]. Beijing: Commercial Press, 2005.

Wang, Jiajian. *中国近代海军史论集 Zhongguo Jindai Haijun Shi Lunji (Collected Essays on the History of Modern Chinese Navy)*. Taibei: Wenshizhe Chubanshe, 1984.

李鸿章与北洋舰队:近代中国创建海军的失败与教训 Li Hongzhang yu Beiyang jiandui: jindai Zhongguo Chuangjian Haijun de Shibai yu jiaoxun (Jiaoding Ban) [Li Hongzhang and the Beiyang Fleet: The Failure and the Lessons of Naval Construction in Late Imperial China]. Revised Edition. Beijing: Sanlian Shudian, 2008.

Wang, Quchang. *严几道年谱 Yan Jidao Nianpu [A Biographic Chronology of Yan Jidao]*. 1936. Reprint. Shanghai: Shanghai: Shanghai Book Store Publishing House, 1991.

Wawro, Geoffrey. *Warfare and Society in Europe, 1792- 1914*. London: Routledge, 2000.

Wells, John. *The Royal Navy: An Illustrated Social History, 1870-1982*. Stroud: Sutton Publishing Ltd, 1999.

Wittfogel, Karl A. *Oriental Despotism: A Comparative Study of Total Power*. New Haven and London: Yale University Press, 1957.

Wong, Roy Bin. *China Transformed: Historical Change and the Limits of European Experience*. Ithaca, NY.: Cornell University Press, 1997.

Wright, Mary C. *The Last Stand of Chinese Conservatism: The T'ung-chih Restoration, 1862-1874*. Stanford: Stanford University Press, 1957.

Wright, Richard N. J. *The Chinese Steam Navy, 1862-1945*. London: Chatham, 2000.

Wright, Stanley F. *Hart and the Chinese Customs*. Belfast: WM. Mullan & Son, 1950.

Xiao, Yishan. *清代通史 qingdai tongshi [A General History of the Qing Period]*. Revised Edition. Taibei: The Commercial Press, Ltd., 1962.

Zhang, Shiping. *中国海权 Zhongguo Haiquan [China's Sea Power]*. Beijing: People's Daily Press, 2009.

Zhang, Tieniu and Gao, Xiaoxing. *中国古代海军史 Zhongguo Gudai Haijun Shi [A Naval History of Premodern China]*. Beijing: PLA Press, 2006.

Zhang, Wenmu. *论中国海权 Lun Zhongguo Haiquan [On China's Sea Power]*. Beijing: Ocean Press, 2009.

Zhang, Zuoxing ed. *船政文化研究——船政奏议汇编点校辑 Chuanzheng Wenhua Yanjiu: Chuanzheng Zouyi Huibian Dianjiaoji [Researches on Fuzhou Navy Yard's Achievements: Comments and Corrections regarding A Collection of Memorials concerning Navy Yards]*. Fuzhou: Haichao Sheying Yishu Chubanshe, 2006.